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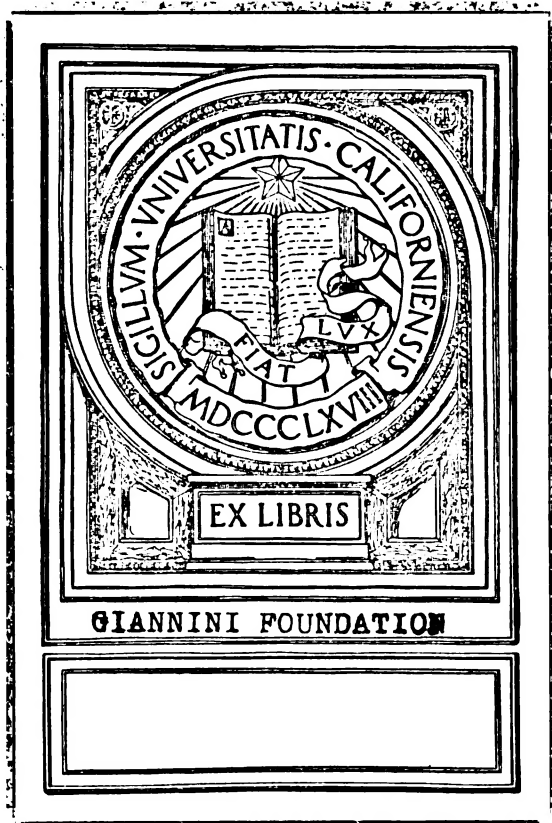
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## MARKETING FRUITS AND VEGETABLES

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By Charles J. Brand.
- " 2 - Grades and Standards for Fruits and Vegetables.  
By Wells A. Sherman.
- " 3 - Inspection of Fruits and Vegetables.  
By Wells A. Sherman.
- " 4 - ~~Marketing~~ Fruits and Vegetables. By Edwin Smith.
- " 5 - Transportation of fruits and vegetables.  
By Edwin Smith.
- " 6 - Financing the Fruit and Vegetable Industry.  
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- " 7 - Where to Sell and How. By R. E. Hanley.
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- " 19 - Marketing Apples and Peaches. By Arthur J. Farley.





# *A Picture of the Fruit and Vegetable Industry*

BY CHARLES J. BRAND



## MARKETING FRUITS AND VEGETABLES LESSON 1

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UNIVERSITY OF CALIFORNIA  
BERKELEY, CALIF.

# A PICTURE OF THE FRUIT AND VEGETABLE INDUSTRY

BY CHARLES J. BRAND

Formerly Vice-President and General Manager of  
the American Fruit Growers, Incorporated

\* \* \*



## MARKETING FRUITS AND VEGETABLES LESSON 1

"Every Lesson by a National Authority"

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CHICAGO

**GIANNINI FOUNDATION**

THE MAN WHO CONDUCTS THIS LESSON

GIANNINI



CHARLES J. BRAND

There are few men who understand the fruit and vegetable industry from the combined viewpoint of the practical business man and the student as thoroughly as Mr. Brand.

Mr. Brand was chosen as the first chief of the Federal Bureau of Markets when it was established in 1913, and he guided that organization through the first stages of its work, until 1918. When he became general manager of the American Fruit Growers, Inc., the Bureau had become one of the most helpful in the Department of Agriculture. Some of his most constructive work was done in connection with the fruit and vegetable industry, and Mr. Brand came into close touch with all of the leaders in the field.

In recognition of Mr. Brand's familiarity with the fruit industry of the nation, he was appointed vice-president and general manager of the national sales organization known as American Fruit Growers' Inc. This organization, with its own orchard and truck acreages in all sections of the country, in-

cluding all of the major fruit and vegetable crops, needed a man as manager who knew not one crop or one section, but who understood the industry in all of its interrelations and from a national viewpoint.

Mr. Brand's combined experience as a government official and as a major executive in one of the largest marketing organizations in the country, fits him to write on the subject of this lesson as few men are qualified to do.

### HOW TO STUDY THIS LESSON

There are 29 principal fruits and vegetables, and each one has certain peculiarities of its own and special marketing methods have been developed because of these peculiarities.

Most fruits and vegetables are produced during a very short season. They are highly perishable, and so must be handled promptly and with great care. These difficulties make the marketing of fruits and vegetables much more interesting, and any man who likes to do hard things finds in the marketing of fruits and vegetables unusual delight, because there is always extreme satisfaction in accomplishing anything that has uncommon complications.

### Treatment Carefully Systematized

The complexity of the marketing machinery for fruits and vegetables is systematized and clarified in the lessons you are to have from now on. And it is not likely that any student will feel that marketing fruits and vegetables is any more difficult than marketing other products after he has mastered a few of the first lessons in this course.

The principal variation from studying the marketing of other products is illustrated in this lesson. The difference is that the products must be studied separately, and in this lesson, which is unusually long, you will find that the text has been divided into two principal parts, with 14 sections. This division makes it easy to study and easy to comprehend. In order to help you in your study, this lesson has been divided into five assignments, each one of which must be studied separately and must be mastered before you pass on to the next assignment. These five assignments are as follows:



### ASSIGNMENTS

1. Master Part I, Sections 1 and 2—The Industry As a Whole—and the Apple Crop.

2. Master Part I, Sections 3, 4, 5, and 6—Citrus Fruits, Grapes, Peaches, and Strawberries.

3. Master Part II, Sections 1 and 2—The Vegetable Crops—Potatoes.

4. Master Part II, Sections 3, 4, and 5—Tomatoes, Onions, and Cabbage.

5. Master Part II, Sections 6, 7, and 8—Melons, Future Development, Publicity.

### Know the Industry as a Whole

The two parts of the lesson divide the study of fruits from the study of vegetables. And in Section 1 of Part I, you are given a good idea of the industry as a whole, including both fruits and vegetables. It is extremely important that you master Section 1 thoroughly.

While you are not expected to memorize Table I, it is an important table for you to study. There you get a concise idea of the comparative importance of the different fruit and vegetable crops. You certainly ought to remember the standing of the first five crops, and it would be still better if you would remember the standing of the first 10.

Remember, however, that this table is based on the number of carloads, rather than on the value in dollars. There would be a little difference in the order if value were given instead of carloads. For example, bulky watermelons could not retain their position if the rank were based on value instead of on carloads.

Figure 1 will help you to familiarize yourself with the fruit-growing territories. When you study this map, together with the reading matter in the lesson that describes it, you will have a much better idea of the real fruit territory. The high specialization so common in American agriculture is particularly emphasized in the production of fruits.

California is the one big state in the production of both fruits and vegetables, and it has such a big lead over other states that it is likely to remain the leader for some time.

### How to Study Statistics

Keep in mind always in studying statistics, that conditions change constantly and where the rank of two states is rather close, that rank is

likely to change, even from year to year. It is important, however, to have the principal fruit-growing states in mind, especially the first 10.

In studying both Table I and Table II, you will find paper and pencil most helpful. One of the best ways to realize the importance of figures contained in tables and to get these figures firmly fixed in your mind, is to copy the table onto another sheet of paper, arranging it in a little different way, if possible. The copying of the figures fixes the situation in your mind much better than simply reading them.

As an example of the way of arranging the tables differently, let us consider Table II. You might make a row of columns along the top of a sheet of paper, containing the names of the fruits instead of the years, placing the years along the left-hand side. If you do this, you will have emphasized to you that the order of rank of the different fruits is different for the different years. For example, oranges and peaches will change places for the years 1919 and 1920. The rank in Table II is based on the 1921 value.

Another way to vary the table is to enter only the figures indicating thousands of dollars. In other words, omit the last three numerals. Still another way is to enter the figures in millions of dollars; instead of writing \$241,574,000, you might enter 242. It is easier to compare 242 with 83, 95 and other figures, than it is to compare the total numbers. It has been felt important, however, in some cases to give complete numbers so you might have them for reference.

### Don't Divide Your Attention

It is suggested in your assignments, that you consider Section 2 on the apple crop, together with Section 1, which covers the industry as a whole. However, this does not mean that you are to study the two sections together. It is better to master Section 1 first, and then consider Section 2 by itself, remembering, however, what you learned in Section 1. In Section 2, concentrate your mind on apples, and when you feel that you have mastered that subject, then answer the questions that are provided for assignment 1.

After answering these questions, you will, of course, proceed to assignment 2. And your method of study there will be similar to that used in completing assignment 1. The principal point to remember is to concentrate your mind on the citrus crop until you have thoroughly mastered what is given on that subject. You will, of course, refer to the discussion of the apple crop and make certain comparisons. But imagine yourself, if you can, a grower of oranges, and study Section 3 from the standpoint of an orange grower.

The same suggestion applies to Section 4; that is, imagine yourself a grower of grapes. Having mastered Sections 3 and 4, then study Section 5 from the viewpoint of a peach grower.

### **Your Foundation Knowledge is Here**

Do not be confused by the fact that not all of the methods used in marketing these individual crops are discussed in these various sections. It would be impossible to give a complete discussion all in one lesson. The rest of the lessons in this course will complete your knowledge, because the individual crops will be referred to frequently as you proceed.

The method of following assignment 3 is very similar to that suggested for assignment 1. You must first have your general information on the vegetable crop as a whole. And then you must concentrate your mind on one crop at a time, until you have mastered that. The potato crop, being the largest and so the most important of all vegetable crops, is given more space than is devoted to others. This should be significant to you and should encourage you to be sure that you have thoroughly mastered this section before going farther. The questions, of course, are to be answered for each assignment before you proceed to the next one.

### **You May Get New Conceptions**

The principal suggestion that will help you in studying assignment 4, is that the tomato crop is far more important than most folks realize. Possibly because of its extreme perishability, the tomato has been considered by those who are not familiar with its marketing, to be a comparatively small crop. But in this lesson you will learn differently. And as you proceed with other lessons,

you will realize the unusual importance of the tomato crop even more.

The marketing of onions and cabbage has a certain similarity. In many cases, the same market men handle both crops. It is quite common that where cabbage is grown, onions are grown also, and the same storehouse is often used for both cabbage and onions. This applies, of course, to the late varieties which are stored for winter use.

After answering the questions for assignment 4, proceed to assignment 5, and concentrate your mind first on the melon crop. You may be surprised at the immense size of the watermelon crop. Most folks have realized the growing popularity of cantaloupes, but not so many, perhaps, have understood that the watermelon crop is also large and popular.

Sections 7 and 8, of course, apply to all fruits and vegetables, and you should study these sections with the same interest that you studied Section 1 in Part I. Because of the fact that conditions are constantly changing and market methods are varied from week to week, it is important that you know what the future is likely to be and what it is that is likely to influence the change of methods.

While it is not expected that you will spend five weeks on these five assignments, it is urged that you hold yourself back and not be too eager to finish these five assignments because they are all in one lesson. You should spend at least two weeks (or 12 hours) in a study of this lesson.

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# **A PICTURE OF THE FRUIT AND VEGETABLE INDUSTRY**

**BY CHARLES J. BRAND**

If you are to get the most out of your study on the marketing of fruits and vegetables, you must realize the important place this industry holds in the agriculture of our nation. Understanding as you do, from your study of previous lessons, that the United States leads the world in agriculture, you will be even more impressed with the importance of the fruit and vegetable industry.

Although 1919 figures show that fruits and vegetables stand in fourth place among the agricultural industries of our nation, it is only fair to say that from the standpoint of agricultural commerce, fruits and vegetables stand third rather than fourth. This is justified by the fact that hay and forage crops which hold second place in total values, do not enter into commerce enough to give them that place from the standpoint of marketing.

Only cereals and cotton, therefore, are entitled to be classed ahead of fruits and vegetables, and cotton does not have a very big lead over fruits and vegetables. It is entirely probable, therefore, that in certain years, when the cotton crop is small, the fruit and vegetable crop might be large, and so move into second place.—Editor's Note.

## **PART I**

### **Section 1. THE INDUSTRY AS A WHOLE**

Keep in mind the title of this lesson as you study. This is a picture of the industry as a whole and it is most important for you to have the facts contained herein.

The relative importance of fruits and vegetables will be better understood when you realize

that the total commercial vegetable crop has almost twice the value of the total commercial fruit crop. As a matter of fact, the value of potatoes just about equals the total value of all fruits. This is all based on 1919 figures.

### Why Part of the Crop Is Not Marketed

It has been estimated that not more than 50% of the fruits and vegetables produced ever reach a market. This is due to several causes, among which may be mentioned:

1. Consumption on farms
2. Disease
3. Unfavorable weather conditions
4. Scarcity of pickers when the crop is ripe
5. Difficulty in securing proper equipment, especially where refrigerator cars are required in large numbers
6. Spoilage in transit because of the extremely perishable nature of many fruits and vegetables
7. Over-ripe fruit
8. Improper icing

Every additional handling increases the danger of spoilage through bruising. It is little wonder, then, that such a small portion of the total production ever reaches market.

### The Extent of the Commercial Industry

It is difficult to ascertain an accurate total of fruits and vegetables which actually enter commercial channels. Probably the closest estimate that has ever been made is a tabulation made by the Federal Bureau of Markets in 1916. This included all of the car-lot shipments of fruits and vegetables made in that year with the less than car-lot (l.c.l.) and express shipments converted into even cars.

The information was secured from the individual railroad station agents of the United States, about 25,000 in number. Naturally, there are some inaccuracies to be expected in the figures and it is very likely that the actual total number of cars exceeds

the number tabulated by the government. The records show a total of 634,145 cars of fruits and vegetables shipped in the year 1916. These are divided as shown in Table I.

### Wide Variety Grown Commercially

This list is of importance mainly because it shows the wide variety of fruits and vegetables produced on a commercial scale in this country. All the important kinds of fruits and vegetables are represented in this summary, but their comparative commercial importance is more accurately indicated in Table II and Table VI. These tables give the rank of crops as based on value.

Table I is important mainly because it shows the comparative transportation problem. For example, watermelons stand second to Irish potatoes in bulk, but in value, watermelons stand in 10th place. This emphasizes the importance of a proper adjustment of freight rates taking into account not only bulk and weight, but value. This was brought home to farmers by the post-war rate changes.

This table also emphasizes the relative importance of car supply during the shipping seasons. Car shortage may be more serious in the movement of a bulky commodity than of a commodity of less bulk but greater unit value.

### Irish Potatoes Far in the Lead

Irish potatoes are far in the lead with nearly 192,000 cars; over twice as many as the nearest competitor, apples, with 87,251 cars. Then follow oranges, watermelons, peaches, cabbages, and onions. All other commodities are credited in this table with less than 20,000 cars.

It may be a surprise to many to know that over 16,000 cars of bananas and over 10,000 cars of celery were shipped commercially in the United States in 1916. Other equally surprising facts may be gained from a careful study of Table I.

Table I. ORDER OF RANK OF FRUITS AND VEGETABLES  
SHIPPED IN 1916

( Based on car-lot shipments)

Kind	: :Number of: : Cars :	Kind	:Number : of : Cars
Irish potatoes:	191,751	Pears.....:	7,489
Apples.....:	87,251	Lemons.....:	7,482
Oranges.....:	50,134	Mixed Vegetables:	6,210
Watermelons....:	28,939	Lettuce.....:	4,700
Peaches.....:	25,026	Dry beans.....:	4,020
Cabbage.....:	24,505	Cucumbers.....:	3,522
Onions.....:	22,043	Cauliflower.....:	2,872
Mixed fruits...:	19,367	Raisins.....:	2,860
Tomatoes.....:	19,323	String beans....:	2,706
Strawberries...:	18,044	Spinach.....:	2,653
Cantaloupes....:	17,321	Kale.....:	2,579
Bananas.....:	16,301	Grapefruit.....:	2,327
Sweet potatoes:	15,695	Cranberries.....:	1,790
Grapes.....:	12,062	Pineapples.....:	1,303
Celery.....:	10,195	Asparagus.....:	1,272
	:	Peppers.....:	1,066

### Wide Fluctuation in Production

The total value of all fruits in the census year 1919 was 755 million dollars. In 1920, it was 744 million dollars. In 1921, particularly by reason of killing frosts in the early spring which reduced the production of apples, peaches, and other orchard fruits, and also by reason of somewhat lower market prices, the value was only 525 million dollars.

The severe reduction in 1921 can best be shown by comparing 1920 and 1921 apple figures. In 1920, our crop was nearly 224 million bushels, whereas in 1921, it was only 97 million bushels.

Peaches dropped from 17 million bushels to 11 million bushels. These wide fluctuations in production create one of the most difficult problems in the marketing of fruits and vegetables.

### PRODUCTION AREAS AND VALUES

The fruit industry is so widespread and includes so many crops, that to convey an adequate and interesting picture of it, we must discuss, first, the whole crop in its general bearings, and then the individual crops that are of the greatest importance.

Census and other government figures usually discuss fruits and nuts together. This is decidedly illogical from a marketing standpoint, as a totally different class of market men handle the different crops.

Nuts are distributed almost wholly through cooperative associations of nut growers and through the wholesale grocery trade, in both cases by individuals who have practically no contact with fruit marketing.

### Classification of Fruits

Fruits themselves are usually classified under two headings: 1. Small fruits, including: strawberries, raspberries, loganberries, dewberries, currants, blackberries, cranberries, and other berries; 2. Orchard fruits, including: apples, oranges, peaches, pears, plums, prunes, almonds, apricots, figs, and other tree fruits.

Grapes are frequently treated separately but for our purpose we will include them with other fruits.

### The Leading Fruit States

As you will see from Figure 1, the 10 states that in 1919 led in fruits and nut production in the order of their rank (based on acreage) are:

- |                 |                  |
|-----------------|------------------|
| 1. California   | 6. Virginia      |
| 2. New York     | 7. Georgia       |
| 3. Pennsylvania | 8. Washington    |
| 4. Michigan     | 9. West Virginia |
| 5. Ohio         | 10. Missouri     |

California is so far in the lead that no other state is likely to approach her rank for some time to come. When you consider the value of fruits





tion of apples, first in the production of grapes, and first in the production of peaches.

The production in her southern district is chiefly citrus fruits, walnuts, apricots, avocados, and dates. The production in the San Joaquin Valley is chiefly raisins, table and wine grapes, peaches, apricots, apples, figs, and some citrus fruits. In her northern district around Sacramento the production includes peaches, apricots, plums, prunes, grapes, walnuts, almonds, apples, and pears.

### What Other States Produce

New York holds second place by being second in the production of apples, second in the production of grapes, and tenth in the production of peaches.

Florida's fruit acreage is devoted mostly to citrus fruits, with some peaches.

Georgia's production is mostly peaches and pecans.

### The Important Fruits

No other fruit comes anywhere near to apples in value. When you consider the country as a whole, and for a series of years, apples stand way above all others. However, oranges and peaches hold important places. Some years, oranges are ahead of peaches, other years, peaches lead oranges.

In studying Table II, you will note the variations in the two years. But you will see that apples always lead. From the effective work that is being done to increase the use of oranges, it is reasonable to expect that oranges may exceed peaches in value in the future. However, this may not be true every year for so much depends upon frost. Sometimes the frost greatly reduces the orange crop; sometimes it interferes seriously with the peach crop.

It is important to remember that after apples, oranges, and peaches, fourth place in 1920 was held

by strawberries. In some years, the value of the strawberry crop is exceeded by grapes and by plums and prunes.

The place held by strawberries might be considered a little remarkable, due to the fact that strawberries commonly have rather a short season.

Table II. VALUES OF LEADING FRUITS

	: 1919*	: 1921*
1. Apples.....	\$241,574,000	: \$163,000,000
2. Oranges.....	83,399,000	: 64,000,000
3. Peaches.....	95,570,000	: 52,000,000
4. Strawberries....	29,303,300	: 35,385,200
5. Grapes.....	45,626,000	: 29,500,000
6. Plums and prunes	40,984,000	: 20,000,000
7. Pears.....	26,440,000	: 18,000,000
8. Cranberries.....	3,198,000	: 6,400,000
9. Apricots.....	12,223,000	: 5,400,000
10. Figs.....	2,812,000	: 1,400,000
11. Olives.....	1,416,000	: 800,000
	*Bureau of Census Figures	: *Estimated

(Arranged in order of 1921 rank)

However, the development of varieties that bear throughout the entire summer and the increase in the plantings of strawberries in widely separated sections, has lengthened the season for this popular fruit.

Of the other fruits, the pear is the only one that holds a very high place so far as value is concerned.

It is not possible to give uniform statements regarding each variety of fruit, due to the fact that statistics are not available in many cases. However, the importance of apples, citrus fruits, peaches, strawberries and grapes justifies the special treatment given to each of these crops on the pages that follow.

## SECTION 2. THE APPLE CROP

The apple is far and away in the lead in value of individual fruit crops. Even in 1921, with only about 37% of a crop in the eastern states that ship in barrels, the total estimated value on the farm was 163 million dollars.

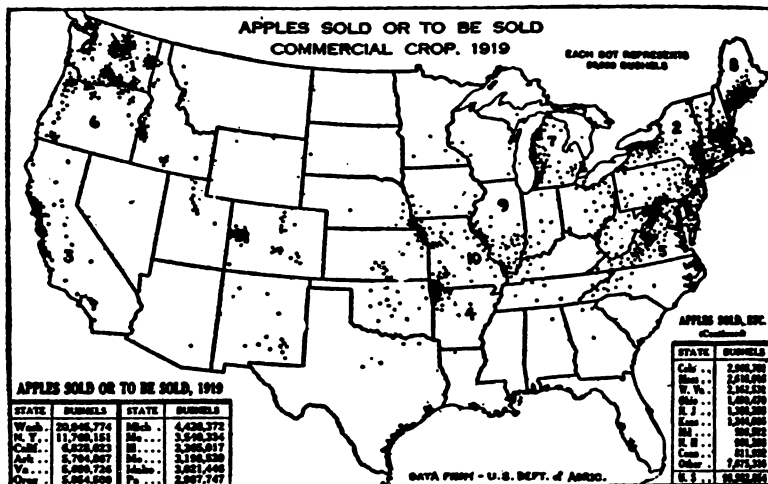


FIGURE 2. WHERE COMMERCIAL APPLE CROP IS PRODUCED

Four of the principal states border on Canada, and only two, Arkansas and Virginia are in the South. You will see that Washington produced almost twice as much as the second state

### Decrease in Number of Apple Trees

In 1910, there were in the United States of bearing and non-bearing trees taken together, 217 million. By 1920, the number had fallen to 151 million trees.

The decrease in bearing trees was from 151 million in 1910 to 115 million in 1920. This is a decrease of 36 million trees, or 23.8% for trees of bearing age.

The decrease in non-bearing trees was even greater, the number in 1920 being 45% less than in 1910.

### Where Apples Are Produced

As you will see from Figure 2 the three Pacific Coast states hold important places in the production of apples. As a matter of fact, the Pacific Coast produced one-third of the apples grown in 1919, although it possessed only one-seventh of the bearing trees. Washington, with three great apple districts, the Yakima Valley in the south, the Wenatchee Valley in the north, and the Spokane Valley in the east, led all states.

### Western States Pack in Boxes

The western crop is packed in boxes, and in addition to the Washington districts, is obtained in commercial quantities from the Hood River and Willamette Valleys of Oregon, the Boise district in Idaho, and Bitter Root Valley in Montana.

The Sonoma and the Watsonville districts in California, the Salt River Valley in Utah, the Grand Junction-Delta Montrose district of Colorado, and all of the states east of the 100th meridian pack practically 100% of the winter crop in barrels, using boxes to a very slight extent, but using bushel baskets extensively for the early varieties.

### Important Eastern Districts

In the East, the most important areas are the Hudson Valley and Lake Erie districts in New York, the New England area, the Appalachian territory, including parts of Maryland, Virginia, and West Virginia, the southern Illinois territory, Western Michigan, the Ozarks in Arkansas and Missouri, and the Northwestern Missouri district.

### Effect of Freight Rates on Production

About 15% of the apple trees of bearing age in 1920 were located in the western half of the United States and of this 15%, almost half is in the state of Washington. There has been relatively little planting of new orchards anywhere in the United

States. This has been especially noticeable in the West, during recent years. This reduction in the West is due particularly to high freight rates which make it impossible to ship anything except the first class fruit to market. It costs almost 80 cents a box to ship apples from Wenatchee to New York. If western apples were packed in barrels, this would amount to \$2.40 a barrel, so that the burden of freight rates is readily apparent.

### Why the Reduction in Trees Occurred

The reduction in number of trees has taken place chiefly in ill-adapted regions and, as a consequence, it is not as significant as it would otherwise be. While there has been no great planting movement in recent years, there has been much new planting at certain times in the best adapted commercial growing sections.

In New York State, the premier apple growing section of the East, four important counties increased in number of bearing trees in 10 years by 300,000.

### Production Per Tree Is Increasing

During the 10-year period, the yield per tree has increased 20%. This is due, no doubt, to better spraying, fertilizing, pruning, and to the location of the larger part of the industry in better adapted apple growing sections.

## SECTION 3. THE CITRUS CROP

Oranges, lemons, and grapefruit compose the bulk of this crop. There are minor quantities of tangerines, kumquats and one or two other lesser members of the citrus family.

Oranges are by far the most important. California is far in the lead, with Florida ranking second. The Gulf Coast has a small acreage confined almost exclusively to the Satsuma variety. Florida

grows a number of varieties, practically all of the seeded kinds. California grows almost exclusively the Washington Navel and the Valentia Late, although the St. Michael, the Mediterranean Sweet and a few other varieties are grown in small quantities.

### Where Citrus Fruits Are Grown

While oranges are grown generally throughout the citrus belt, lemons are confined practically to California and grapefruit to Florida. California produces only about 400 cars of grapefruit a year, and Florida does not produce any commercial quantities of lemons.

Subtropical fruits to which the citrus belong cannot withstand more than a few degrees of frost, hence the strict geographical limitation as to area.

California production of citrus fruits is concentrated in three localities. The southern section is practically confined to five counties, including Los Angeles, Riverside, San Bernardino, San Diego, and Ventura. The next district in importance is north of Tehachapi Pass in the San Joaquin Valley, and is confined largely to Tulare County. In the Sacramento Valley north of San Francisco there is also a considerable commercial production by reason of the relatively frostless climate.

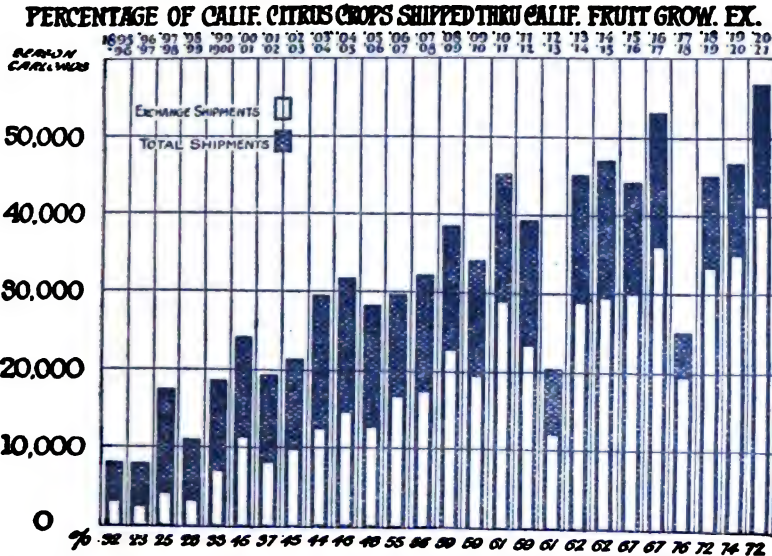
### How California Markets Oranges

Figure 3 is a chart which shows the total citrus crop of California and the proportion shipped by the growers' own company, the California Fruit Growers' Exchange.

It is evident from this figure that in the seasons of 1895-96 and 1896-97 the total citrus crop of California was between 8,000 and 9,000 cars, and that only about one-third of it was handled by the California Fruit Growers' Exchange. The full length of each column represents the total crop; the black portion, the part handled by independent shippers;

and the part from the base line to the black column the part handled by the Exchange.

In a general way, it will be observed that the quantity handled by independents has remained relatively stationary for 20 years, while the quantity handled by the Exchange has risen from about 3,000 cars to more than 40,000 cars.



**FIGURE 3. HOW GROWERS HAVE MARKETED THEIR CROPS**

Notice the white areas in the bars. They represent the citrus fruits shipped by the growers' own organization. Notice how the total amount has grown, and how some years are extremely poor

An inspection of the graph also shows how seriously the crop is affected by frosts. In 1912-13 the crop was less than 50% of normal, as it was in 1917-18.

### Quantity and Value

As an illustration of the extent of production and value of the citrus fruit crop in California and Florida (the only states for which reliable estimates are available), the figures in Table III are given.

Table III. PRODUCTION OF CITRUS CROPS

	: Florida :		: California :		: Value	
Year	: Boxes	: Value	: Boxes	: Value	: Boxes	: Value
1919	: 7	: \$18	: 16	: \$43	: 23	: \$61
1920	: 8	: \$18	: 22	: \$47	: 30	: \$65
1921	: 8	: \$15	: 23	: \$50	: 31	: \$65

(Figures given in round millions)

The severe frost in California for three successive days about January 23-25, 1922, severely reduced the California crop. However, a frost in the case of citrus crops usually is more effective in reducing the crop of the succeeding season than the crop which is being harvested when the frost occurs.

## SECTION 4. THE GRAPE CROP

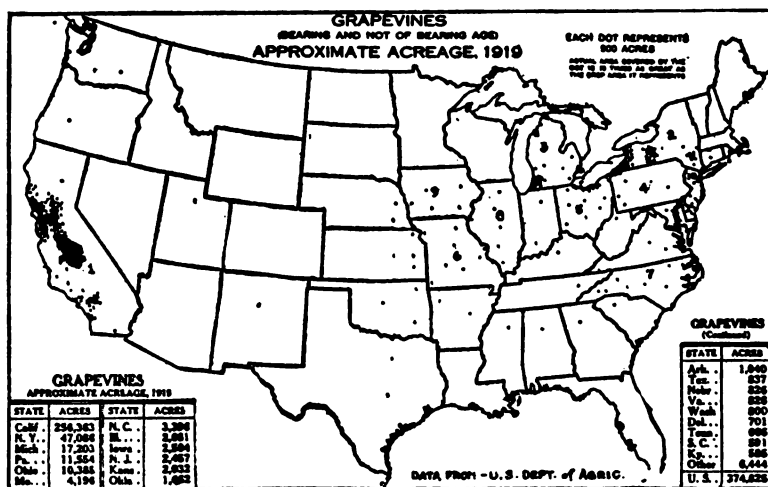


FIGURE 4. THE GREAT GRAPE SECTIONS ARE IN THE NORTH North Carolina is the only state south of the Mason and Dixon Line producing a good quantity of grapes. California produces more than all of the rest of the states put together

The great grape growing sections are located in west central and western New York, northwestern Pennsylvania, western Michigan, and California. While commercial quantities are grown in a number of other



states, particularly in the Lake Erie section of Ohio, fully 90% is grown in the states named.

Figure 4 shows the distribution of the acreage of grape vines and indicates the importance of the California crop. Two-thirds of the nation's acreage is in that state.

The California crop includes a wide range of varieties of table, wine, and raisin grapes. The most important table grape centers are Lodi and Cucamonga.

The most important wine grape centers are Sonoma, Napa, and Santa Clara. Fresno is the center of the raisin grape industry. It should be remembered, however, that table and wine grapes are grown to a considerable extent in all of these territories.

The western Michigan grape district is in the section around Paw Paw.

The western New York area is usually designated as the Chautauqua Erie grape district, while the central New York area is in the Finger Lakes region.

Eastern grapes are mostly of the Concord, Delaware, and Niagara varieties. Western grapes include Tokays, Cornichons, Thompson Seedless, and the Oriental, and South European varieties.

#### Tonnage of Fresh Grapes Shipped

The crop season of 1922 for fresh grapes was practically over by November 15. Up to that time the northern California district had shipped 13,102 cars. The central district, which centers around Lodi, had shipped 20,129 cars. The southern district had shipped 3,841 cars.

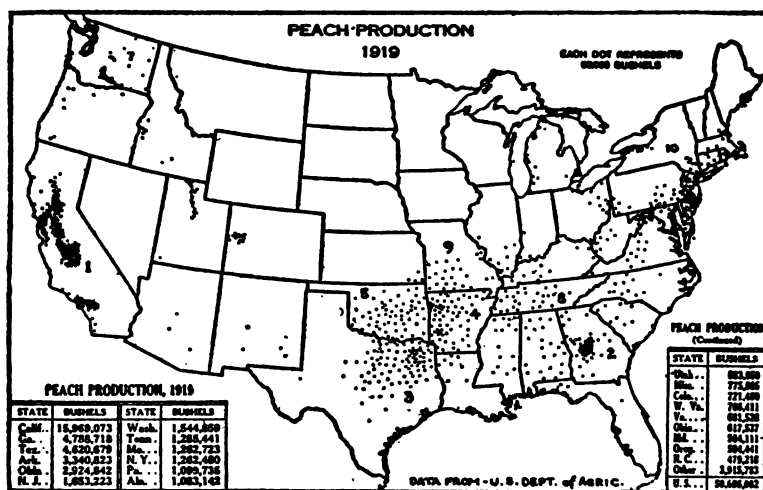
New York had shipped 7,488 cars, and all of the New York sections combined, shipped 7,913 cars, which brought the total shipments for the year to 52,473 cars on November 15 with some small tonnage still to be shipped in California.

The total shipments for 1921 were 37,203 cars.

### SECTION 5. THE PEACH CROP

Peaches are, with justice, regarded as a speculative crop, and production fluctuates between very wide extremes, although there has been a progressive increase during the twenty-two years from 1899 to 1921.

Figure 5 shows the wide distribution of commercial peach production extending through the more temperate parts of the country.



**FIGURE 5. THE SOUTH LEADS IN PEACH PRODUCTION**

While California is the leading state, the South is the leading section in peach production. Notice the rank of states as indicated by the numbers on the map

The northern Prairie States grow practically no peaches by reason of the severity of the winter cold. California produced nearly one-third of the nation's crop in 1919, outstripping all other states. Fresno County, a great raisin grape section, alone producing one-tenth.

#### Decrease in Acreage

In 1910, there were 95 million bearing peach trees in the United States. In 1920, this number

had been reduced to 66 million, a reduction of 29 million in the number of trees of bearing age.

Peach trees are so susceptible to bacterial and insect enemies, and to cold, that the number of trees that die each year is very heavy. This reduction in total number of bearing trees, as was the case with apples, is not as significant as it might be, by reason of the fact, that the plantings that remained are more largely in commercial orchards, and hence, have a greater productive capacity than the farm orchards of earlier years.

The number of trees not of bearing age in 1910 was 42 million, and the number in 1920 was 21 million, a decrease of more than 20 million or over 48%.

### **Fluctuation in Crop Production**

The peach crop fluctuates extraordinarily from year to year. A normal crop would amount to about 46 million bushels. As long ago as 1900, a crop greater than that figure was produced. In 1915, the largest crop in our history was picked, totalling 64 million bushels.

### **Car-lot Shipments by States**

The United States Bureau of Markets has, for a period of years, been securing from all of the railroads, telegraphic reports of the movement along their lines. These data have been kept for a sufficient number of years to be of distinct interest. Table IV shows the five year average and the total shipments for 1921 and 1922.

Notice the distinct fluctuations from year to year.

The peach producing sections that show the most consistent growth during recent years are located in North Carolina, Tennessee, New Jersey, New York, Illinois, and California.

Table IV. CAR-LOT SHIPMENTS OF PEACHES, BY STATES  
(arranged in order of 1922 rank)

State	: Average :	Total :	Total
	:1917-1921:	1921	: 1922
	:	:	:
1. California.....:	6,035	: 7,606	: 8,365
2. Georgia.....:	7,125	: 10,636	: 7,347
3. New York.....:	3,460	: 2,840	: 6,521
4. Illinois.....:	175	: 1	: 1,660
5. Michigan.....:	655	: 198	: 1,570
6. Arkansas.....:	950	: 596	: 1,518
7. New Jersey.....:	865	: 5	: 1,507
8. North Carolina....:	225	: 589	: 1,435
9. Colorado.....:	1,155	: 1,219	: 1,432
10. Utah.....:	815	: 839	: 1,103
11. Washington.....:	1,215	: 1,097	: 958
12. Maryland.....:	460	: 1	: 426
13. Delaware.....:	145	:	: 422
14. Indiana.....:	25	:	: 350
15. Missouri.....:	75	: 1	: 278
16. Tennessee.....:	130	: 218	: 248
17. Virginia.....:	140	:	: 228
18. Pennsylvania.....:	370	: 45	: 208
19. Ohio.....:	270	: 76	: 200
20. Oklahoma.....:	285	: 42	: 153
21. Idaho.....:	125	: 103	: 124
22. South Carolina....:	50	: 31	: 78
23. Oregon.....:	45	: 60	: 46
24. Texas.....:	1,075	: 964	: 26
25. Alabama.....:	115	: 47	: 25
26. West Virginia.....:	440	:	: 7
27. New Mexico.....:	35	:	: 3
28. Connecticut.....:	55	: 73	: 1
Other States.....:	29	: 13	: 28
Total.....:	26,564	: 27,300	: 36,267

#### Section 6. WHERE STRAWBERRIES ARE GROWN

Strawberries are widely grown in the United States, but the regions of commercial production are concentrated in a relatively small number of areas.

Table V.            STRAWBERRY SHIPMENTS  
(In order of 1922 rank)

<u>States</u>		: 1922
		: <u>Cars</u>
1. <u>Tennessee</u>		: 3,772
	Dayton, Evansville, Spring City,	:
	Humboldt, Medina, Dyer, Sharon	:
2. <u>Arkansas</u>		: 2,069
	Judsonia, Bald Knob, Van Buren,	:
	Springdale, Johnson, Alma	:
3. <u>Missouri</u>		: 1,856
	Neosho, Sarcoxie, Monett, Pierce	:
	City	:
4. <u>Maryland</u>		: 1,634
	Marion, Pittsville, Fruitland,	:
	Princess Anne	:
5. <u>Virginia</u>		: 1,621
	Norfolk Section, Onley	:
6. <u>Louisiana</u>		: 1,608
	Independence, Hammond, Amite, Pon-	:
	chatoula, Tickfaw, Pickups	:
7. <u>North Carolina</u>		: 1,105
	Chadbourn, Mount Tabor, Teachey's,	:
	Rosehill, Mount Olive	:
8. <u>Delaware</u>		: 928
	Selbyville, Bridgeville	:
9. <u>Kentucky</u>		: 754
	Bowling Green	:
10. <u>Alabama</u>		: 450
	Castleberry, Atmore, Cuba, York,	:
	Cullman, Thorsby	:
11. <u>Florida</u>		: 325
	Plant City, Starke, Lawtey	:
12. <u>New Jersey</u>		: 277
	Port Norris, Landisville	:
13. <u>Illinois</u>		: 246
	Anna, Villa Ridge, Farina	:
14. <u>Mississippi</u>		: 96
	Osyka, Sanford, Russell, Madison,	:
	Durant	:

The most important production centers are in Cumberland, Camden, Burlington, and Atlantic Counties, New Jersey; Sussex County, Delaware, Wicomico, Worcester, Caroline, and Anne Arundel Counties, Maryland; Hamilton, Rhea, Crockett, Gibson, Lauderdale, and Madison Counties, Tennessee; Warren County, Kentucky; Barry, Lawrence, McDonald, and Newton Counties, Missouri; and the adjacent counties of Washington and Benton, Arkansas; White County, Arkansas; Tangipahoa parish, Louisiana; Berrien County, Michigan; Sonoma, Sacramento, and Los Angeles Counties, California; and Hood River County, Oregon.

There are three thousand counties in the United States, and the 29 names had one-third of the nation's acreage of strawberries in 1919.

Like other perishable crops, the strawberry crop fluctuates greatly. The total shipments for the six years from 1916 to 1921 were as follows:

1916... 16,236 cars	1919... 8,105 cars
1917... 15,065 cars	1920... 8,490 cars
1918... 8,452 cars	1921... 10,681 cars

The best picture, from a commercial standpoint, of the size of the strawberry crop and the areas of commercial production, with the amount of production, can be obtained from a study of Table V showing the principal shipping points.

## PART II

### Section 1. PRODUCTION AREAS AND VALUES OF VEGETABLES

In considering questions of vegetable marketing, it must be borne in mind, that three sets of conditions prevail in vegetable growing in the United States.

1. There is a vast quantity of garden truck grown for home consumption in home gardens which never enters into commerce.

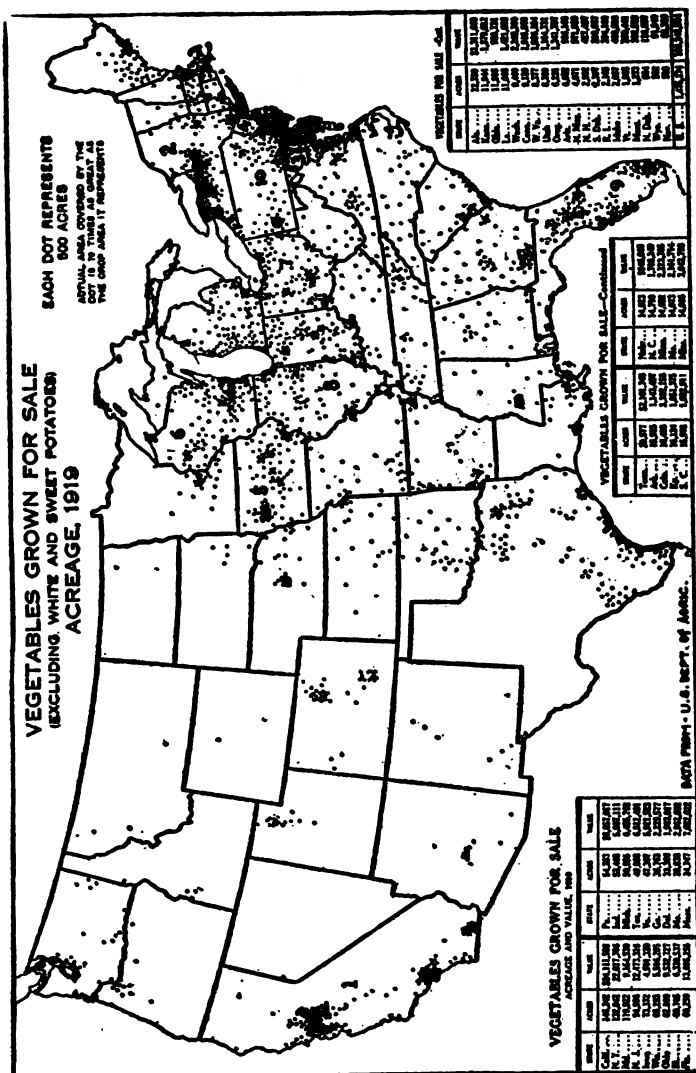


FIGURE 6. WHERE COMMERCIAL VEGETABLES ARE GROWN

A large local demand is necessary for the development of commercial vegetable growing. That is why the big producing centers are near large cities

2. A notable quantity of vegetable crops is grown within a relatively short radius of all of our great population centers under what may be called market gardening conditions.

3. The two previously mentioned sources of supply fall short, both as to time of availability

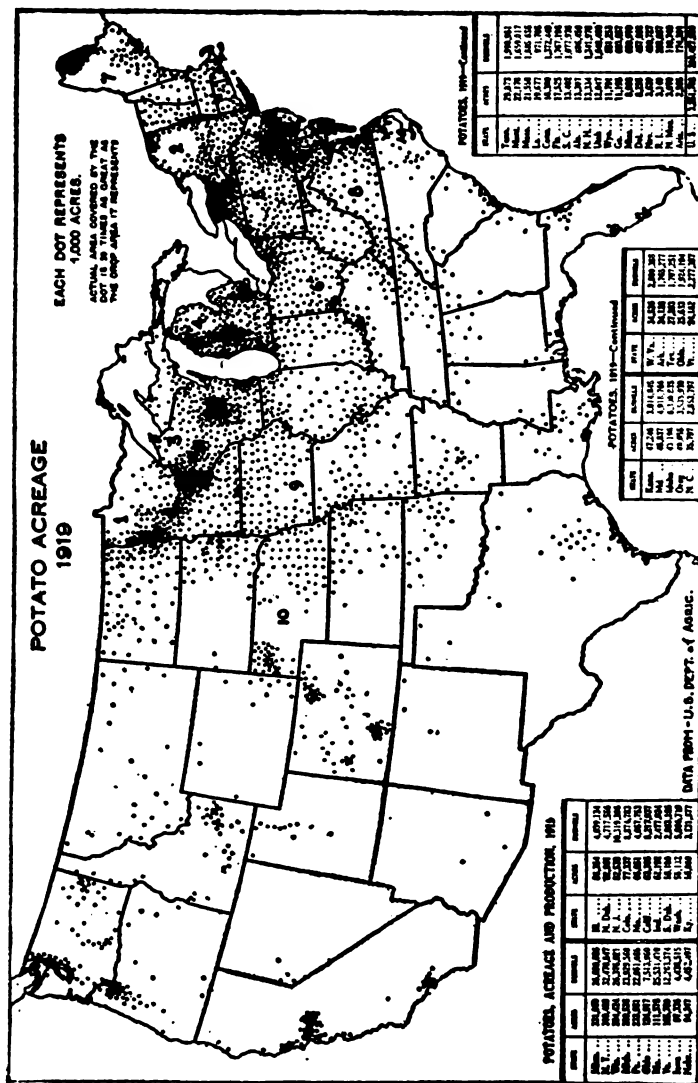


FIGURE 7. THE NORTH GROWS THE NATION'S POTATOES

As you will see by the numbers that indicate the rank of states, most of the commercial potato

and quantity for supplying the needs of our metropolitan populations which gives rise to vegetable production in what may properly be termed "concentrated truck growing sections." These concentrated truck growing sections are shown in Figure 6



The order of leadership in 1919 was:

- |               |                  |
|---------------|------------------|
| 1. California | 6. Wisconsin     |
| 2. New York   | 7. Ohio          |
| 3. Maryland   | 8. Illinois      |
| 4. New Jersey | 9. Florida       |
| 5. Iowa       | 10. Pennsylvania |

The map indicates the vegetables grown in trucking centers and under market gardening conditions. It should be noted that potatoes and sweet potatoes are excluded in this particular map, but that white potatoes are shown in Figure 7.

Onion and cabbage production, for the winter market, is scattered through the states practically from western New York to Iowa. Generally speaking, the market gardening areas can be found on the map near the large population centers.

### The Leading Vegetable Crops

The value in the order of their positions, (1919) including potatoes and sweet potatoes, is shown in Table VI.

Table VI. VALUE OF MOST IMPORTANT VEGETABLE CROPS  
(000's omitted)

Rank in 1919	:	1919	:	1920	:	1921
1. Potatoes.....	:	\$514,855	:	\$461,778	:	\$385,192
2. Potatoes, Sweet.:	:	135,514	:	117,834	:	86,910
3. Tomatoes.....	:	38,675	:		:	
4. Onions.....	:	23,543	:	17,567	:	18,856
5. Cabbage.....	:	17,881	:	20,110	:	16,576
6. Sweet Corn.....	:	17,298	:		:	
7. Cantaloupes.....	:	17,133	:	17,256	:	15,050
8. Celery.....	:	9,462	:		:	
9. Lettuce.....	:	8,200	:	11,384	:	15,042
10. Watermelons.....	:	7,515	:	11,281	:	11,523

The combined value of the 10 important crops shown in Table VI was about 83% of the value of all vegetable crops in 1919.

The most important area of production of vegetables for sale, naturally, includes the area of greatest population and territory within easy shipping distance of the densest population. This area extends along the Atlantic Coast from Long Island to the northern line of North Carolina. In this area, about one-fifth of the nation's commercial vegetable crop is produced.

A second area of unusual importance lies in western New York extending from the vicinity of Utica to and southwest of Buffalo.

The southern Lake Michigan section supplying Chicago stands next in importance.

Florida and south Georgia are important, not only because of the quantity they produce, but, because of the fact, that they supply the market during the winter months when northern territories are not marketing. About one-third of the winter vegetables come from this area. Texas is also an important winter shipper.

California is an important year round shipper but of more than ordinary importance in the late fall, winter, and early spring. The chief production of the southernmost of the three concentrated California districts is the Imperial Valley, whose most important crops are muskmelons, lettuce, honeydew melons, and green peas. The neighboring valley to the north, Coachella Valley, is an important early onion district.

The Los Angeles district is particularly important in lettuce, celery, cabbage, onions, asparagus, tomatoes, potatoes, and miscellaneous small vegetables. The Sacramento district is especially important in asparagus and celery.

To indicate the importance of the state of California in the production of vegetables for sale, it may be stated, that this state produces almost 10% of the total for the United States. In 1919, it pro-

duced 57% of the asparagus; 27% of the muskmelons; 27% of the celery; 33% of the lettuce; and 13% of the onions.

While it is not possible to give an individual discussion of each important vegetable crop, a brief statement follows on those constituting by far the greater part of the tonnage and value.

## Section 2. THE POTATO CROP

Irish potatoes are divided into two commercial crops. The early or southern crop, and the late or northern crop.

The early crop is far more perishable than the late crop. It is grown largely in the southern states and begins to appear on the market from Florida as early as March.

### Where Early Potatoes Are Grown

The chief producing section in Florida is in the vicinity of Hastings, and the climax of shipments is usually reached around the first to the middle of May. Heavy shipping comes from states farther north in late May and early June. The climax of southern shipments is reached in the section around Beaufort, S. C.

The next heavy shipping territory is on the low coastal plain lands in the vicinity of Charleston, S. C., where the peak of shipments usually falls around the 10th to the 15th of June.

The section in the counties around Florence, S. C., has gained in importance during recent years. It markets its crops at very nearly the same time as the Charleston section. Then the territory around Elizabeth City, N. C., comes into bearing and after that, what is generally known as the Norfolk section, begins to ship.

Later, or almost at the same time, the Eastern Shore of Virginia and Maryland begin to ship, and finally the early crop usually concludes with the Long Island shipments in August.

The season of shipments in some cases is rather brief, so far as real quantities are concerned. South Carolina, for instance, begins shipping in normal years about May 1, and after June 30, usually does not ship a single car. On the other hand, some of the early potato sections, like the Eastern Shore of Virginia, begin shipping around June 1 and continue until September 30, while New Jersey and Long Island not only raise potatoes for the early market, but are also winter potato producers.

A similar situation occurs further west. Texas and Louisiana begin to ship early and, as the season grows, later commercial shipments of early and medium early potatoes arise further north, usually concluding with heavy shipments from the Kaw Valley of Kansas.

The early crop of potatoes is of unusual commercial value by reason of its being in the luxury class. It is estimated that about 17% of the total crop in a normal year is made up of early varieties.

#### Where Late Potatoes Are Grown

The heaviest regions of potato production are in the northern United States and, generally speaking, these areas lie north of the Corn Belt.

The quality and yield of potatoes are best in a cool climate, particularly in regions that have warm, sandy, or loamy soils. Minnesota, New York, Wisconsin, Michigan, Pennsylvania, and Maine are the most important producing states, as you see from a study of Figure 7.

During 1921 and 1922, North Dakota has grown immensely in its commercial production, and the acreage, in 1922, was estimated to have exceeded the 1921 acreage by 270%. There were increases in acreage in other states in 1922, and in some territories unusually favorable production conditions prevailed.

As a result of this great increase, prices were the lowest that have been known in recent years. The average farm price on November 21, 1922, was 68.8 cents per bushel, whereas on the same date in 1921, the value was \$1.23 per bushel.

### Where Shipments Originate

Table VII shows by state of origin, season of shipment, and number of car-lots shipped, the relative importance of all of the principal potato shipping states as reported to the U. S. Bureau of Agricultural Economics.

Table VII. CAR-LOT SHIPMENTS OF POTATOES

Leading Sections (Late)	: : 1921- : 1922	: : 1920- : 1921	: : 1919- : 1920
1. Maine	: 37,968	: 17,817	: 23,444
2. Minnesota	: 29,652	: 23,214	: 22,058
3. Colorado	: 17,809	: 11,345	: 8,810
4. Michigan	: 15,033	: 17,119	: 12,237
5. Idaho	: 14,641	: 8,143	: 6,853
6. Other New York	: 14,001	: 11,001	: 9,116
7. Wisconsin	: 10,946	: 18,661	: 21,975
8. North Dakota	: 10,487	: 1,846	: 2,229
9. California	: 9,254	: 10,090	: 8,487
10. Washington	: 6,224	: 3,765	: 3,098
11. Nebraska	: 5,301	: 3,071	: 1,661
12. New York, L. I.	: 4,929	: 5,501	: 3,701
13. Pennsylvania	: 3,573	: 6,489	: 3,742
14. South Dakota	: 3,353	: 1,926	: 689
15. Montana	: 1,820	: 949	: 352
16. Oregon	: 1,391	: 1,756	: 786
17. Utah	: 1,074	: 563	: 426
18. Nevada	: 464	: 415	: 689
19. Iowa	: 89	: 922	: 251
Total Leading Sections (Late)	: :130,604	: :144,593	: :188,009

Table VII. (Continued)

Other Sections (Late)	1921- 1922	1920- 1921	1919- 1920
1. New Jersey	10,475	17,147	10,409
2. Kansas	2,379	1,982	1,132
3. Virginia	1,267	1,687	674
4. Wyoming	953	545	265
5. Kentucky	640	1,132	866
6. Maryland, 2d crop	567	846	725
7. Vermont	303	90	43
8. Missouri	300	224	115
9. Arizona	222	40	80
10. New Hampshire	130	56	48
11. Delaware	118	158	172
12. Illinois	96	96	123
13. West Virginia	37	71	4
14. Rhode Island	32	4	47
15. Ohio	28	141	90
16. Indiana	10	52	4
17. New Mexico	3	3	7
18. Massachusetts	2	7	11
19. Connecticut	0	20	74
Total Other Sections (Late)	17,562	24,301	14,889
Southern Crop Sections	1921- 1922	1920- 1921	1919- 1920
1. Virginia	18,273	14,943	11,520
2. North Carolina	3,599	3,513	3,306
3. South Carolina	2,510	3,070	1,217
4. Florida	2,344	3,351	2,275
5. Maryland	2,123	2,259	1,434
6. Louisiana	1,163	887	559
7. Texas	1,109	738	808
8. Alabama	696	308	90

9. Oklahoma	:	281	:	592	:	677
10. Georgia	:	191	:	274	:	126
11. Arkansas	:	135	:	236	:	186
12. Mississippi	:	116	:	82	:	151
13. Tennessee	:	27	:	18	:	28
<hr/>						
Total Southern Sections:	:	32,567	:	30,271	:	22,377
<hr/>						
GRAND TOTAL	:	238,138	:	199,165	:	167,870
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### Distribution of Shipments by Months

Because of the succession of early and late districts, and the ease of storing potatoes at the shipping point rather than at the terminal market, shipments have come to be quite regular throughout the year. For example:

During the year beginning August 1, 1921, and ending July 31, 1922, the shipments in no month were less than 10,000 cars. The heaviest shipments were in October, with 43,250 cars; the next heaviest shipments occurred in September, with 26,040 cars.

### Imports and Exports

While apples are the most important of our perishable fruit and vegetable products in the export trade, potatoes, nevertheless, have been shipped out of the country annually to the extent of over 4 million bushels in some years. The average exportation for the period 1911 to 1913 was 1,814,000 bushels. Exports for 1918 were 2,852,000 bushels; for 1919, 3,642,000 bushels; and for 1920, 4,154,000 bushels.

The importation of potatoes has generally been on a much larger scale than the exportation. The average imports for 1911 to 1913 were 5,707,000 bushels.

The chief sources of imported potatoes are Canada and Denmark. The Canadian importations come

largely from New Brunswick and Prince Edward Island.

From Denmark there were imported 812,090 bushels during the 1920-21 season.

### THE SWEET POTATO CROP

The sweet potato has grown very largely in commercial importance during and since the World War. In 1900, the farm value of the sweet potato crop was nearly 25 million dollars, and in 1910, it had risen to over 40 million dollars.

#### Production Areas

The most important producing states in their order of production are Georgia, Alabama, South Carolina, Mississippi, Louisiana, North Carolina, Texas, and Virginia. New Jersey and Delaware, though not so important in quantity of production, are exceedingly important by reason of the fact that practically all their crop is grown for shipment.

#### Value of Crop

The value of the sweet potato crop for three years was:

<u>1919</u>	<u>1920</u>	<u>1921</u>
\$135,514,000	\$117,834,000	\$86,910,000

It is to be noted that the 1919 value was \$48,-604,000 more than the 1921 value. The 1921 crop, because of adverse conditions, chiefly due to drouth, was relatively small, contributing to the lessened value of that year. Another important factor was the reduced value per bushel. The 1921 farm value on December 1 was estimated at 94.7 cents per bushel, while the 1919 value on the same date was \$1.34.

#### Storage Facilities

An important factor in the growing commercial importance of sweet potatoes is the construction of suitable storage and curing houses. Under the leadership of the United States Department of Agriculture, assisted effectively by the state agricultural



forces, there has been built in the neighborhood of 3,000 sweet potato storages with a combined capacity exceeding 12 million bushels! Approximately half of these houses are commercial, and this half makes up about 10 million bushels of the total capacity.

Georgia alone has facilities for storing over 2 million bushels. Delaware, Texas, Louisiana, and Tennessee, each have storage capacity for more than a million bushels. Sussex County, Delaware, is the most important county in the United States in this respect, with facility for over a million bushels.

### Commercial Varieties

A very large number of varieties are grown. However, scarcely a dozen are of real commercial importance.

Dry, mealy sweet potatoes sell best in northern markets. The most important variety of this class is the Big-Stem Jersey. Southern markets buy moist, fleshy varieties most readily, and the most important in this class are the Nancy Hall and the Porto Rico. The most important medium dry variety is the Triumph.

The four varieties named probably constitute 75% of the commercial shipping crop. The Yellow Jersey, the Southern Queen, and the Pumpkin are commercially important in some growing and consuming sections.

The Georgia variety is the one most extensively grown for home use in the Gulf and South Atlantic States.

### Section 3. THE TOMATO CROP

Tomatoes are grown for table use, for canning, and preserving. The canning and preserving industry is usually based on contracts between growers and canning factories in various sections of the country. The most important canning territory includes parts of the states of New York, New Jersey, Delaware, Maryland, and Virginia, although there are very

important canning sections in other parts of the country.

It is not the purpose of this lesson to discuss the canned tomato industry, by reason of the fact, that marketing problems, in the ordinary sense, are settled by the contract between the grower and the cannery.

Tomatoes for table use or slicing purposes are shipped in car-lot quantities from many sections, but the most important, based on shipments for a series of representative years, are shown in Table VIII.

Considering tomatoes grown for all purposes, Eastern Maryland, Delaware, and Southern New Jersey include over one-third of the nation's acreage, and the Los Angeles and San Francisco Bay districts in California about one-tenth.

Virginia and Indiana rank next in importance. The major part of the crops in these states, however, goes into cans.

Turning back to Table VII, it will be seen that, excluding potatoes and sweet potatoes, tomatoes are the most valuable vegetable crop grown in the United States. Figures for the census year 1919 are the only ones available. In that year, the crop was worth \$38,675,000.

#### Where Imported Tomatoes Come From

The luxury loving markets of the United States crave a variety of fruits and vegetables, both in and out of season. Although California and Florida cover the winter season fairly as to time, there are periods when they do not ship, or when the quantity of tomatoes shipped is insufficient to meet the demand.

As a result, there has grown up during the past 10 years in the states of Sonora and Sinaloa, Mexico, a fresh tomato growing and shipping business. These tomatoes enter the United States usually by the way

Table VIII. FRESH TOMATO PRODUCING SECTIONS

Producing Sections In order of Rank	Average No. Cars	Principal Loading Stations
1. Florida (East Coast)	4,000	Homestead, Larkin, Perrine, Pompano
2. California	2,000	Los Angeles, San Jose
3. Florida (West Coast)	1,500	Plant City, Tampa
4. Mississippi (Central Southern)	1,400	Crystal Springs, Hazelhurst
5. Texas (Eastern)	1,200	Jacksonville
6. New Jersey (Southern)	1,110	Swedesboro
7. Tennessee (Central Western)	800	Humboldt, Milan
8. Ohio (Southeastern)	600	Marietta, Lowell
9. Illinois (Southern)	350	Anna, Cobden
10. Missouri (Eastern)	125	St. Louis

Florida is by far the most important producer for the winter market. For instance, it was estimated that there were planted in the autumn of 1922, 15,000 acres in that state. Weather and other conditions play so important a part that it is impossible to state what the total crop will be from the acreage planted, but it would not be out of order to expect from 6,000 to 7,000 cars from the East Coast alone.

of Nogales, Arizona. By reason of soil and disease troubles, there is great variation in the acreage and shipments from year to year. Roughly, it may be said that the shipments vary from 700 to 1,500 cars a season.

The most important growing section is in the valley of the Fuerte River. Production methods are not up-to-date, the best market varieties are not always grown, and packing and shipping methods are crude. As commercial conditions in Mexico improve, so that American enterprise can more safely invest in that Republic, this business will, no doubt, assume fairly large proportions, as there are other sections of Mexico even better adapted than the West Coast to tomato growing.

#### SECTION 4. THE ONION CROP

The onion crop is divided into the early or Bermuda crop and the late or winter crop.

With respect to early crops of each of the important vegetables, it should be observed that the likelihood of profitable marketing usually depends, to an important extent, on the amount of the winter crop that remains on hand in storage at the usual season of movement of the early fresh crop. For example, if there is a large quantity of winter stored potatoes available, a large part of the consuming public will continue to use old potatoes by reason of their cheaper price. In times of great prosperity, this condition is not so noticeable, so that, during the war, it happened on occasion, that as high as \$10 per 180 pound barrel were paid for new potatoes, while perfectly good winter potatoes would scarcely bring shipping charges.

#### How Storage Affects the Onion Market

The same condition may prevail with respect to onions. When old crop supplies clean up, or practically clean up, by April 1 to 15, the new crop outlook is regarded as favorable. If the crop cleans

up by April 1, the California grower has an advantage, as his heaviest shipments usually occur about April 10 to 15. If the clean up is completed by April 15, the Bermuda grower in the section around Laredo, Texas, considers it distinctly to his advantage, as his shipments begin usually about March 25 and conclude by June 1.

### Where Early Onions Are Grown

The important early onion crop states are California, Louisiana, and Texas. The most important late crop states are New York, California, Ohio, Indiana, Massachusetts, New Jersey, Michigan.

Table IX. CAR-LOT SHIPMENTS OF ONIONS BY STATES  
OF ORIGIN

Rank in 1921	:	1919	:	1920	:	1921
1. Texas.....	:	2,876	:	5,086	:	4,209
2. California.....	:	5,219	:	4,526	:	3,648
3. New York.....	:	2,588	:	2,721	:	3,564
4. Massachusetts.....	:	2,917	:	3,373	:	2,835
5. Indiana.....	:	1,158	:	2,646	:	2,428
6. Ohio.....	:	1,890	:	2,909	:	2,128
7. Michigan.....	:	308	:	576	:	591
8. Washington.....	:	611	:	766	:	585
9. Iowa.....	:	502	:	824	:	466
10. New Jersey.....	:	638	:	629	:	436
All other states..:	:	2,167	:	1,894	:	2,469
Total.....	:	20,874	:	25,950	:	23,359

Minnesota, Iowa, Wisconsin, and Kentucky. Naturally, there is variation from year to year by reason of crop conditions in the ranking of the states.

Table IX, showing car-lot shipments, for the years from 1919 to 1921, inclusive, will give a fairly clear idea of the location of the industry:

### The Texas Bermuda Onion Crop

The Texas Bermuda onion crop is a short season crop, being similar in this respect to the Imperial

Valley cantaloupe crop. During a period of about 60 days, a crop of from 3,000 to 6,000 cars of a decidedly perishable product must be moved from the banks of the Rio Grand on the Mexican border to the consuming markets in the more populous centers of the United States.

The first cars usually move during the last few days in March. Before the end of April, if no unfavorable conditions arise, a few shipping stations will be sending to market daily 200 or more cars. Shipments then gradually taper off so that by the middle of May not more than 25 cars per day may be moving, and by June 1, the movement will have ceased completely.

#### Market Distribution

During the spring of 1922, the Bureau of Markets traced to primary destination 3,786 cars originating in the Laredo district. The importance of various markets is illustrated in part by Table X, which

Table X. THE MOST IMPORTANT ONION MARKETS, 1922

Primary Destination	: Number : :of Cars:	Primary Destination	: Number : :of Cars:
St. Louis .....	1,328	Philadelphia ...	92
New York .....	522	Pittsburgh .....	85
Chicago .....	227	Kansas City .....	62
East St. Louis...	167	Houston.....	41
Boston .....	133	Fort Worth .....	40
New Orleans .....	124	Buffalo .....	29
Taylor, Texas...	109	Cleveland .....	26
San Antonio, Tex.	108	Cincinnati .....	26
	:	Milwaukee .....	20

shows important central markets and the number of cars consigned to them. Only a selection of the more important ones is given:

It must be remembered, particularly with respect to cities like St. Louis, Missouri, East St. Louis, Illinois, San Antonio, and Taylor, Texas, and other

billing points, that they are used as primary destinations, with a view to subsequent diversion of cars to final consuming markets. It will be seen that the 17 cities listed above were the primary destination of 3,149 cars of the 3,786 cars traced, or 83%.

### Why We Import Onions

The exporting of onions from the United States is negligible. Imports are sometimes of considerable importance, particularly in view of freight rates existing at the present time in the United States.

There were times, during 1920 and 1921, when onions could be brought from the Canary Island to New York City at a less cost for transportation than onions could be shipped from Ohio points, and only a little more than the cost of shipping them from the Connecticut Valley and Western New York to the New York market!

Prices during the spring of 1922 in American markets were high enough, in spite of the tariff, to attract onions from surplus production regions in foreign countries. Onions come to the Pacific Coast from Australia, and to the Atlantic Coast from Egypt, South America, West Indies, Mexico, and the Bermudas.

During the first six months of 1922 nearly 700,000 bushels were imported, which is equal to nearly 1,300 carloads. The total imports for the year 1920 were 1,819,000 bushels.

### SECTION 5. THE CABBAGE CROP

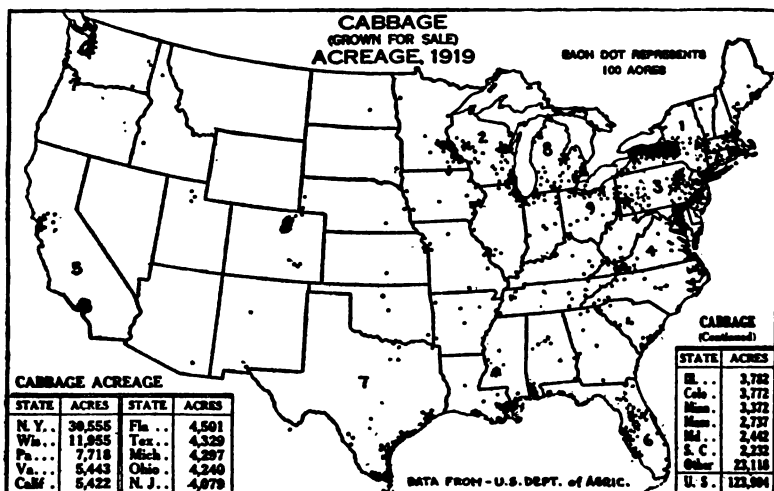
Cabbage is grown on a commercial scale in at least 25 states. The same distinction with respect to the early and late crop is to be noted as prevails in the case of potatoes and onions.

The commercial production of the country is shown in Figure 8. You will see that, in total production, the states rank as follows:

- |                 |                |
|-----------------|----------------|
| 1. New York     | 6. Florida     |
| 2. Wisconsin    | 7. Texas       |
| 3. Pennsylvania | 8. Michigan    |
| 4. Virginia     | 9. Ohio        |
| 5. California   | 10. New Jersey |

### Where Early Cabbage Is Grown

The most important states producing for the early market are Florida, California, Texas, Missis-



**FIGURE 8. CABBAGE PRODUCTION RATHER SCATTERED**

While the largest quantities of cabbage are produced in northern states, there are good quantities produced in many southern states.

The numbers indicate the order of rank

Mississippi, Louisiana, and South Carolina. Coleman, Sumter County, and Bartow are the chief Florida shipping points.

Los Angeles, Anaheim, and Fullerton are the most important California shipping points.

Mission, San Benito, Brownsville, and Mercedes are the chief points of origin in Texas.

Crystal Springs and Hazelhurst are in the center of the heaviest production in Mississippi.



Orleans, St. Charles, and St. Tammany parishes make up the most important Louisiana producing territory.

Charleston and Meggetts are the chief shipping points in South Carolina, both being located in Charleston County. The major part of the Charleston shipments originate on Young Island in Charleston harbor.

### Where Late Cabbage Is Grown

The late crop should really be divided into medium and late. However, this is not usually done in practice.

The medium late crop is grown in the Norfolk section and in Wythe County, Virginia; in Muscatine County, Iowa; in certain California sections; and in Adams and Weld counties, Colorado. In some of these, late cabbage is also grown.

The important centers of production in eastern Virginia are: Norfolk, Cape Charles, Eastville; and southwest Virginia, Rural Retreat, Marion, Crockett, and Atkins.

Most of the important centers of production in Colorado are: Brighton, the headquarters of the Colorado Cabbage Exchange, Greeley, Lupton, Wattenberg, Ione, Traceyville, and Ault.

By far the most important state in the production of late cabbage is New York. All of the states in the Great Lakes territory are important, but the district south of Lake Erie extending from Syracuse to Buffalo, produces nearly one-fourth of the late cabbage crop of the country. The most important counties are Cortland, Madison, Monroe, Niagara, Onondaga, Ontario, and Wayne. The section around Waterford, Erie County, Pa., may be considered a continuation of the New York territory.

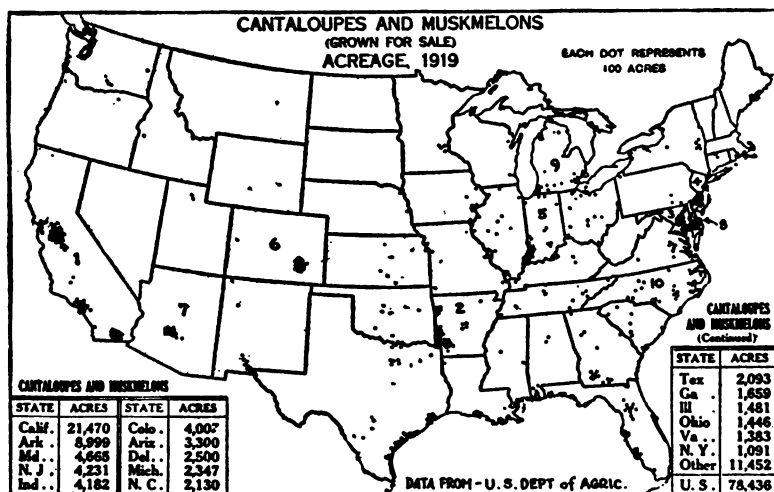
Wisconsin is the heaviest commercial producing state in the middle northwest. The important centers are Cambria, Ripon, Perryville, Somers, Appleton,

Greenville, Shiocton, Corliss, Caledonia, Union Grove, and Racine.

### SECTION 6. THE MELON CROP

The commercial crop to which the name "cantaloupe" is applied would more correctly be designated the "muskmelon" crop. Popular usage has, however, decreed otherwise, so that the name of one variety of muskmelon has come to be applied to the whole crop of which it is only a part.

So popular has the cantaloupe grown during the last 15 years that it is now one of the most widely



**FIGURE 9. WHERE CANTALOUPE ARE GROWN**

Cantaloupes are now commonly shipped entirely across the country, as you will see by the important places held by California, Colorado and Arizona

used, thoroughly distributed, and seasonably available articles of food in the United States.

### Where Cantaloupes Are Grown

Fresh cantaloupes in commercial quantities become available from the Imperial Valley of California, during the latter part of May, and continue on our markets until well into October, the last

important shipping territory being the region of relatively higher altitude, around Rocky Ford, Colorado.

Figure 9 shows the location of the most important commercial producing areas.

### Rank of States In Cantaloupe Production

In 1919 the order of rank in cantaloupe production was as follows:

- |               |                    |
|---------------|--------------------|
| 1. California | 6. Colorado        |
| 2. Arkansas   | 7. Arizona         |
| 3. Maryland   | 8. Delaware        |
| 4. New Jersey | 9. Michigan        |
| 5. Indiana    | 10. North Carolina |

California is the most important cantaloupe state in point of acreage and quantity of production. The chief centers are the Imperial Valley in the south, with Brawley, Heber, and Calexico the chief shipping points; Los Angeles County and Stanislaus County, with Turlock, Keyes, and Demair the most important shipping stations.

In point of acreage, the state of Arkansas ranks next to California, but the production per acre is very much less. Harris, Blevins, McCaskill, Nashville, and Van Buren are among the more important shipping points.

An important territory is in the Salt River Valley near Glendale and Phoenix, Arizona. This territory usually ships from 900 to 1,500 cars between June 25 and August 5.

The cantaloupe territory on the New Mexico-Texas line is in the Messila Valley, the chief center being La Tuna.

The heavy shipping district in Colorado is the Rocky Ford-Ordway section in Arkansas Valley.

The important producing territory in Indiana is in the counties of Gibson, Jackson, Knox, and Posey. The heavy shipping points are Vincennes,

Decker, Poseyville, and Johnson. The headquarters of the distributing agencies are mostly located in the town of Princeton.

The heavy producing territory in Georgia is in the vicinity of Fitzgerald, Valdosta, and Camilla.

Sussex County, Delaware, Gloucester County, New Jersey, and Wicomico County on the eastern shore of Maryland are also important producing sections.

### Rapid Growth of the Cantaloupe Industry

As an illustration of the rapid increase of the cantaloupe industry, the Imperial Valley furnishes an important instance. In 1905 only 297 carloads were shipped from this section. Since that time, the volume has increased more than 3,000%! The season of 1922 was the greatest that has ever been experienced when to July 20, 12,056 cars had been shipped as compared with 10,708 in 1921, and 8,903 in 1920.

The average yield is from 150 to 160 standard crates, but many fields will run 200 crates to the acre.

### Enormous Shipments in 1922

The largest number of cars ever shipped on one day in any previous season was in June, 1919, when 348 went out in a single day. On June 9, 1921, 335 cars were shipped. In 1922 all previous records were broken when on June 19, 385 cars were shipped. The movement continued to grow and by the 23d, 525 cars rolled; on the 26th, 557; and on the peak day of the season, June 27, 648 cars were loaded. This was just 300 cars higher than the record day of previous years.

During the last 10 days in June, an average of more than 500 cars rolled daily, while for the three weeks' period, June 17 to July 4, the daily loadings exceeded 300 cars per day, except on two Sundays.

This crop was marketed by 43 distributors, only two of whom shipped less than 100 cars. The largest individual distributor shipped 950 cars.

When you bear in mind that this crop is produced 3,000 miles away from its greatest single market, New York City, is highly perishable, and must be shipped in refrigerator cars practically on passenger train schedules, you can readily visualize the multitude, peculiarity, and difficulty of the marketing problems that arise.

In 1917 cantaloupe shipments totalled 16,719 cars from all shipping sections of the United States. In 1922 the shipped crop totalled nearly 30,000 cars.

### THE WATERMELON CROP

One of the remarkable occurrences of recent years in American dietary, is the rate at which consumption of fruits and vegetables has increased and consumption of meat has decreased. Watermelons have increased in use along with the rest.

#### Where Watermelons Are Grown

The 1920 crop of nearly 40,000 cars was nearly 10,000 carloads greater than the 1919 crop. Comparable figures are not available for all years, but it is interesting to note that the 1921 crop totaled 46,463 cars. In 1922, the shipments reached 48,000 cars.

In 1922 Georgia shipped a total of 13,098 cars; Florida, 10,897 cars; South Carolina, 4,524 cars; and Texas, 3,630 cars. California is usually a heavy shipping state and its 1922 total was around 4,000 cars.

The southeastern states in 1922 contributed 26,342 cars during the period from May 23 to August 7. This quantity was produced in Florida, Georgia, South Carolina, North Carolina, and Alabama. Of the 26,342 cars, 7% went to New England, 34% to the Middle Atlantic States, over 25% to the Middle West, 6% to the states west of the Mississippi, and 27% to the Southern States. New York City alone received 3,055 cars, or 11.6%, and Chicago, 1,737 cars, or 6.6%.

When Watermelons Are Marketed

Without attempting to discuss further the location, importance, and shipping seasons of the main watermelon area, Table XI is given to indicate to the student, the widespread character of the watermelon industry and the relative importance of the different areas. The tonnage for 1917 is given as that is the year for which the most complete relative figures are available.

Table XI. Watermelon Shipping Areas, 1917

State	No. Cars	Shipping Season	Larger Loading Stations
Georgia.....	8,770	June 1- Sept. 15	Thomasville, Quitman, Ft. Valley
South Carolina:	4,107	June 20- August 31	Lena, Furman, Ridgeland
Florida.....	3,622	May 1- August 15	Bowling Green Ocala, Live Oak
Texas.....	2,871	May 15- Oct. 15	Hemstead, Weatherford, Como
Missouri.....	2,533	July 15- Oct. 1	Malden, Gibson, Clarkton
Alabama.....	1,552	June 15- Oct. 15	Grand Bay, Malvern
North Carolina:	1,201	July 15- Sept. 1	Laurinburg, Fayetteville, Maxton
California....	1,137	June 1- Oct. 10	Brawley, Dinuba, Turlock
Maryland.....	1,019	Aug. 1- Oct. 1	Salisbury, Reid's Grove
All Other States	3,612		
Total.....	30,424		

### SECTION 7. THE FUTURE DEVELOPMENT

The commercial fruit and vegetable industry has developed in such a short time that it has not received the attention that has been devoted to some other classes of agricultural commodities.

Fresh fruits and vegetables, furthermore, are seasonal crops. They must be sold while in prime condition or loss occurs. Some crops of this class, such as strawberries and lettuce, must be marketed immediately after harvesting. Others, like potatoes and apples, may be stored several months without serious deterioration. This complicates the marketing problem.

In addition, the production of fruits and vegetables is subject to greater fluctuation than is the case with most other commodities. An acre of good wheat land will produce only about 30 bushels, or 1,200 pounds. It will take a great many additional acres to have an appreciable effect on the crop of a nation that runs into 600 or 800 million bushels.

Cabbages, on the other hand, often yield 10 tons (20,000 pounds) to the acre, and a comparatively small increase in acreage, may push supply far above the demand with disastrous results to prices.

#### Production Close to Consuming Capacity

At the present time, the production of many classes of fruits and vegetables is perilously near the present consuming capacity of the country. We have thousands of acres of land in various sections of the country that are admirably adapted to the production of fruits and vegetables, but until methods of marketing the existing crops are improved, or the consuming capacity of the country is increased, it would be folly to think of developing them.

#### How Citrus Growers Avoided Over-Production

Much has been done to improve the situation, but still more remains to be accomplished. Twenty years

ago, the citrus growers of California were confronted by the problem of over-production. Conditions had seemed to favor the orange and lemon industry for a number of years. Prices were good and the growers increased the size of the groves and many new growers entered this attractive industry.

Then suddenly, something went wrong. Prices began to decline in the favorite markets, so that, frequently, a carload of oranges would sell for less than the cost of production. There seemed to be more oranges than the people could consume.

Then followed some wild efforts to find new markets. Cars were diverted from the glutted markets to other points, but this afforded very uncertain relief, because when one large grower diverted a carload from New York to Baltimore, the chances were that his neighbor and a number of other growers would do the same thing. So that by the time half of the cars arrived in Baltimore, prices would be demoralized there also.

#### How Organization Is Increasing Demand

Something had to be done, and a number of the leading citrus growers got together and organized the California Fruit Growers' Exchange. This is a producers' organization developed for the purpose of enabling the growers to work out cooperatively the problems that none could solve individually. This organization has been extremely successful. Like any other similar effort, it has had its ups and downs, but through persistence and wise direction it has always managed to maintain a very large and representative membership.

It would be difficult to estimate the good that it has accomplished for the citrus growers of California, and incidentally, for those of Florida as well.

The Exchange, first of all, tackled the problem of distribution. It regulated the shipments to the



various markets. Having control of a large part of the total crop, this could be done effectively. It then undertook to improve the methods of growing, harvesting, and packing.

Last, but not least, it inaugurated a very effective system for stimulating the consumption of citrus fruits by educating the public through advertising. This has been so very effective that the consumption of oranges and lemons has steadily increased with gratifying results to all concerned.

### Some Growers Saved by Cooperation

Following similar methods, the California Associated Raisin Growers rescued a large group of grape producers who were on the verge of destitution, and placed their industry upon a very sound and profitable foundation. Many other successful cooperative organizations have been developed recently in California, and to a limited extent in other parts of the country.

An important development which has been peculiar to the fruit and vegetable industry has been the organization of large private or semi-cooperative selling agencies. Among the large outstanding ones, have been the North American Fruit Exchange, the General Sales Agency, and the American Fruit Growers, Inc. These sales agencies are treated fully in succeeding lessons.

One of the big difficulties in marketing fruits and vegetables has been that even though a community might cooperate in shipping, it would not have sufficient tonnage, or a sufficiently long season to warrant maintaining its own sales force in the large markets. The California Fruit Growers' Exchange, however, has been able to maintain sales organizations in principal markets, because it has oranges and lemons moving to market every month in the year.

The private sales agencies were developed to meet this need for representatives in large markets. They have their representatives in all of the important markets, and are able to maintain this force, because they handle shipments from various growers or cooperative associations in different parts of the country, some of which are shipping each month in the year.

### Selling by Auction May Increase

Another phase of fruit and vegetable marketing is thought by certain students of marketing to have great potential possibilities. This is the auction method of selling, which will be covered thoroughly in a separate lesson. The fruit auctions play an important part in the perishable business in most large markets, but with a few notable exceptions, it is true that auctions have been used mostly to dispose of shipments which could not be sold through the usual trade channels.

Consequently, in many cities auctions have become the last resort for fruit which has been shipped from one market to another, and which has reached the point where it must be sold without further delay. The California Fruit Growers' Exchange sells the larger part of its fruit through auctions and has apparently profited by it.

Students who feel that there will be a real development in this method of selling in the future, base their arguments mainly upon these two points:

First, the development of standardization will greatly facilitate auction selling.

Second, fruit auctions seem to be the nearest approach to the centralized exchange system which has been so effective in selling live stock, grain, and cotton.

There is a greater opportunity for waste and loss in the fruit and vegetable industry than in almost any other departments of agriculture. Ignor-

ance of proper marketing methods, the perishable nature of the crops, and the lack of organized selling machinery are the reasons.

### **Why By-Products Reduce Losses**

The development of the by-product industry has done much to reduce unnecessary waste and losses by making profitable use of fruits and vegetables that cannot be marketed profitably otherwise. The canning and drying of fruits and vegetables, and the making of fruit juices have all helped to prevent loss of surplus or cull products.

While much has been done in the development of the by-product industry, the limit of possibilities in this direction is not in sight, and tremendous developments may be looked for in the next few years. This subject is treated at much greater length in later lessons.

## **Section 8. PUBLICITY FOR FRUITS AND VEGETABLES**

One of the principal problems that the fruit and vegetable grower has to overcome in the marketing of his product, is the tendency on the part of the general public to regard certain of these commodities as luxuries. Much has been done to remove this notion from the public mind, but a great deal still remains to be accomplished. This question is of particular importance to the producers of what are commonly regarded as out-of-season crops.

### **Why Winter Use of Lettuce Increased**

Lettuce is one of these. Previously regarded as a very great luxury in the winter time, its use was confined to the wealthy class whose requirements were largely filled by local greenhouses.

In 1899, the state of California produced only two acres of lettuce. However, the public's appetite for lettuce was being coaxed along by Florida growers, who planted 548 acres in 1899. By 1919, the lettuce acreage in California had increased to 6,121, and in Florida to 2,664.

The increase in consumption, indicated by these figures, has been accomplished without any real concentrated effort on the part of the producers or distributors. If the producers of lettuce could pool their efforts just as the raisin and the walnut growers of California have done, and if they would conduct an educational campaign, the demand for this very healthful and palatable winter vegetable could doubtless be doubled or tripled very quickly.

This is cited as an example of the possibilities of cooperative effort on the part of producers to increase the demand for a commodity that is in danger of being produced in larger quantities than can be sold to advantage, unless demand is increased.

#### How Advertising Made Citrus Fruits Necessities

Advertising, in one form or another, has accomplished the seemingly impossible task of removing citrus fruits from the strictly luxury class, so that they are now considered an absolute necessity by a large portion of the population.

A greater opportunity for the application of modern selling methods is given in the advertising of fruits and vegetables than in any other agricultural commodity. This statement is made for several reasons:

First, because fruits and vegetables generally go to the consumer in the original form.

Second, because the distribution and sales of fruits and vegetables are probably less organized than any of the main classes of agricultural products. Grain, live stock, and cotton already have their organized central market places.

Third, fruits, especially have, until recently, been considered more in the class with luxuries and it is only in the past few years that they have been generally recognized as an essential part of our everyday diet. The educational work of the raisin growers with the slogan "Have you had your iron today?" is especially noteworthy.

**Much Still Remains to Be Accomplished**

One fact must be borne in mind, and that is, that in spite of the noteworthy progress that has already been made in the marketing of the fruit and vegetable crops, much still remains to be accomplished. The industry, as a whole, is unorganized. Even the marketing of our most important fruit crop, apples, is in a chaotic state in many localities, and very little has been done in the way of a consistent effort to stimulate greater use of this crop.

The Federal Bureau of Markets since its organization in 1913, has greatly assisted the fruit and vegetable industry. Its work on standard grades, inspection, and market news service, has done much to bring the industry out of chaos and to put it on a more substantial footing.

The fruit and vegetable industry will always be speculative, because of the perishable nature of the crops, but standard grades, inspection, and the widespread knowledge of marketing conditions can do much to reduce the extent of gambling and render it essentially a well-organized, legitimate business.

**THE ONE MOST IMPORTANT SERVICE**  
**IN RAISING PRICES**

Possibly it is over-stating the matter a little to say that any one factor in the marketing of fruits and vegetables influences prices more than others. But it is generally recognized that the subject discussed in Lesson 2, is the one that has been largely responsible for the better prices and the better demand enjoyed by fruits and vegetables in recent years.

What is it that any shipper can do to greatly reduce his freight bills?

What is it that makes auction selling possible?

What is it that has made housewives willing to pay more for fruits than in former years?

What is it that has made it possible to sell more oranges since growers organized themselves into co-operative shipping associations?

The answers are made very clear in Lesson 2, and after reading it, there will be no doubt in your mind but that it pays shippers to do this work that makes consumers more willing to pay higher prices for good quality fruits and vegetables.

## GLOSSARY OF MARKETING TERMS USED IN THIS LESSON

brassica, n. A large genus of annual and perennial herbs of the mustard family of the old world, furnishing several of the earliest cultivated and most valuable table vegetables such as cabbage, cauliflower, kale, brussels sprouts, etc.

by-product, n. After the best of a lot of fruits or vegetables is sold for the use to which they are best suited, there usually are some of inferior grade that are canned, made into preserves, jellies, drinks, or other useful products known as by-products.

citrus fruit, A fruit borne on trees that do not shed their leaves each season; as opposed to deciduous fruits (which see). The genus includes: oranges, lemons, limes, grape fruits, tangerines, etc.

cucurbitous crop, A crop belonging to the cucurbitaceæ, a genus of herbaceous vines of the gourd family, including pumpkins, squashes, watermelons, cucumbers, etc.

cull, n. An article rejected, or at least placed in an inferior grade. For example, in sorting potatoes, those which are scabby or knotty are thrown out as culls. Sometimes culls have a value. For example: cull potatoes may be used for stock feed. In other cases, culls have little value, or at least no use has yet been discovered for them.

deciduous fruit, Fruit borne on trees that shed their leaves at the close of each producing season, such as apples, pears, plums, peaches, apricots, and others.

divert, v. As used in this lesson, to change the destination of a shipment. Usually only full carloads are diverted.

demoralized price, A low price brought about by a supply greater than the demand. As a rule, a demoralized price is one which does not return shippers a profit. Sometimes the returns are not enough to pay the freight alone.

express shipment. A shipment made through an express company instead of through the railroad company, usually of a small quantity (less than a carload). The shipment usually is made by express in order to decrease the time between the shipping point and the market. There are times when entire carloads are shipped by express, in which case the car is handled the same as an express car, on an express train.

glut, v. A condition that sometimes occurs in a market, characterized by the presence of more of a certain product than can be sold at a price fair to producers before more of the product will arrive for sale.

market news service. A system maintained by the Federal Department of Agriculture, whereby information regarding prices, demand, and supply of fruits and vegetables, is transmitted by telegraph, radio, telephone, and mail, to shipping points, from which the products reported on are to be shipped.

perennial plant. One that continues to grow from one planting, from year to year, as opposed to an annual plant, which is one that must be planted each year. A biennial plant is one that lives for two years from the one planting.

solanaceous crop. Crops belonging to the solanaceae family, a large genus of temperate and tropical herbs, shrubs, and trees. In North America the best known crops of this genus belong to the so-called "night shade" family, and include tomatoes, potatoes and egg-plant.

salad plant. Plants commonly used for making salads, including lettuce, endive, chickory, dandelion, garden-cress, mustard, cives, etc.

tuber crop. A crop cultivated for the tubers or enlarged roots which are used for food for either man or beast.

tonnage, n. As used in this lesson, refers to a total number of tons; often used in an indefinite capacity, that is, without referring to a specific number of tons. Instead of saying, "The total quantity of fruits marketed this year is extra large," the same thing is often said by using the word "tonnage," thus: "The tonnage of fruits marketed this year is extra large."

urban, adj. Descriptive of persons or things, in, or related to a city or town; as opposed to country.







# Grades and Standards For Fruits and Vegetables

BY WELLS A. SHERMAN



## MARKETING FRUITS AND VEGETABLES LESSON 2

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Cook



## THE MAN WHO CONDUCTS THIS LESSON



**WELLS A. SHERMAN**

Mr. Sherman has had an unusual opportunity to study the major developments in the marketing of fruits and vegetables. He is one of the two men who formed the nucleus around which was built the present Bureau of Agricultural Economics of the U. S. Department of Agriculture.

When the Bureau of Markets, as it was originally called, was first organized, it was flooded with all sorts of suggested remedies for marketing ills, ranging from purely investigational studies to recommendations for the government to take over the distribution and marketing of farm products. Mr. Sherman was in immediate charge of the investigation conducted to ascertain the fields in which the Bureau of Markets could be of greatest service, and he organized the Telegraphic Market News Service on fruits and vegetables, which has proved so helpful and which has now been extended to other commodities.

All of this was pioneering work and it has brought him into intimate contact with producers, shippers, and men "in the trade."

Mr. Sherman possesses the unusual combination of vision, with the ability to "keep his feet on the

ground" at all times, and he has been an important factor in developing some of the most far-reaching policies of the Bureau of Markets.

Under the recent reorganization of the Bureau, Mr. Sherman was placed in charge of all activities relating to fruits and vegetables, and he now exercises supervision, not only over the Market News Service, but over inspection, grades and standards, and other important lines of work dealing with fruits and vegetables.

It is safe to say that Mr. Sherman probably has as broad a view of the trend and changes in the fruit and vegetable industry as any man in the country. His view on the development and probable future trend of standardization and grading represents an authoritative view on the subject.

### HOW TO STUDY THIS LESSON

This lesson is best studied from two viewpoints. You ought to consider the facts here contained with the viewpoint of the grower. And you will need to study again with the viewpoint of the shipper.

This lesson is particularly clear on the advantages of grading and standardizing. You will find that there are advantages to producers, to shippers, and to consumers. As you study from the standpoint of the producer, you will want to be watching for ways in which the producer can profit by grading. As a shipper, you will want to learn exactly how to get higher prices by having your products graded to meet demands on the markets to which you can ship.

It is, perhaps, wise to give you this precaution in studying this course; do not be disappointed if you do not learn all you wish to know about a subject in the first lesson where the subject is discussed. There are many cases where it is necessary to refer to the same subject in several different lessons, in order to provide adequate treatment. This is particularly true of the subject of grading. There are so many kinds of important fruits and vegetables, each with its own grade standards, that it would be impracticable to attempt to give complete discussions of the grading of each kind in this lesson.

If by chance, you are a student who has had experience in grading, or who has had instruction in this same subject in a college, you will appreciate the practical points brought out in this lesson.

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## **GRADES AND STANDARDS FOR FRUITS AND VEGETABLES**

**BY WELLS A. SHERMAN**

The terms "grading" and "standardization" are used so loosely and interchangeably that it is important at the outset to suggest certain definitions.

Grading consists of separating a product into groups or grades of uniform size, kind, and quality.

Standardization, whether through custom or by law, establishes the permanency of these grades, by defining the nature and character of the commodity included in the grade or the defects excluded therefrom.

Standards necessarily are of many kinds depending upon the nature of the article to be standardized.

In this lecture, our interest will be chiefly in what may be called commercial or trade standards.

There are a considerable number of factors which determine the relative value of fruits and vegetables in the markets. Among these are variety, size, color, texture, maturity, and freedom from injuries caused by diseases, insects, or mechanical means which affect the appearance of the product or impair its keeping quality. Obviously, the most exact method of informing the prospective buyer of the character of the commodity is by a detailed written description which would deal with each factor in detail. Such a method, however, is impracticable commercially and, therefore, certain of these factors influencing value have been more or less arbitrarily grouped, and are considered as a whole. These groups comprise the various commercial grades.

To illustrate; the value of western Spitzen-burg apples is judged by the size, the condition, and the grade. The grade in turn is determined by the percentage of good red color, the relative freedom from misshapen specimens or those which are affected by apple scab, worm holes, bruises, or any other types of injury.

In other words, a grade fixes the minimum requirements for each of a number of factors influencing market value. A lot may be thrown out of grade if it falls below the requirements of one or more of these specifications. The other factors are considered individually, but in connection with the grade.

In general, it may be said that only those factors are grouped together as a grade which can be applied successfully over a wide range of territory and under varied conditions. For example, one can visit every producing section in the country and find that scabby or grub-eaten potatoes are regarded as inferior. Therefore, one encounters no difficulty in setting down as one factor in his No. 1 grade that the lot shall be "free from damage caused by scab and grubs."

On the contrary, the requirements as to size vary widely. In the early districts of Florida and elsewhere, potatoes are dug and profitably marketed when they have attained a diameter of  $1\frac{1}{4}$  inches whereas in seasons of ordinarily heavy production late potatoes of that size are regarded as practically unsalable in northern districts. In Maine, potatoes  $3\frac{1}{4}$  inches in diameter or larger are known in Boston trade parlance as "bulls" and are sold at a heavy discount, while in Idaho, large sizes of generally good quality are sorted out and sold at a substantial premium as "bakers." One might conclude from this that, as a principle in grading, size is a factor to consider independently, and such is indeed the case. Both citrus and deciduous

fruits are now almost universally quoted both as to grade and size.

The problem of standardization is to fix definitely the specification of the grades and to secure their universal adoption.

### **ADVANTAGES OF STANDARDIZATION**

The importance of having definite standards and applying them in the fruit and vegetable trade is not generally appreciated. The following are some of the advantages to be gained:

1. Standards provide the definite basis of trade necessary in doing business at long range, and especially a basis for contracts
2. They tend to eliminate fraud and deception
3. Encourage the actual sorting of the various commodities into classes which meet the particular requirements of the different markets, and thus facilitate distribution
4. Reduce losses in transit by requiring uniformity of maturity in the package
5. Lengthen the marketing period by providing certain classes which may be safely held in storage
6. Provide a basis for cooperative "pooling"
7. Standards furnish a basis for advertising
8. They encourage better methods of production by giving proper recognition to variations in quality
9. They furnish the only basis for accurate and comparable market quotations
10. In general; a reputation for dependability, promotes confidence in the industry, which does much to stimulate consumption and decrease the number of disagreements between shippers and receivers which have resulted in so many rejected shipments and expensive litigations and have in the past constituted one of the heaviest taxes on the industry

### **Benefits to Consumers**

11. Any general increase in marketing efficiency should reduce the costs of distribution per

package. This saving results in benefits both to producer and consumer

12. The consumer buys standardized products over a longer season and at a more or less stable price, cheaper in the long run, than with alternate gluts and famines

### Opposition to Standardization

Wherever standardization of any kind has been attempted in the past, unwise and ignorant opposition has usually been met. For instance, when the standard gauging of railroads was first attempted, the broad gauge of what is now the New York Central extended only to Erie, Pennsylvania. From there to Chicago, the road was narrow gauged. All passengers were forced to detrain and change cars at Erie.

As a result, there grew up at that point a remunerative business for lodging houses, restaurants, hotels, curio dealers, and suppliers of various kinds. When the railroad proposed to widen the gauge and run through trains, roadway, bridges, and other structures were built, but in advance of the first train the citizens of Erie blew up tracks and bridges in order to prevent the consummation of so desirable a form of standardization. So bitter became the fight that the governors of the states of New York and Pennsylvania had to intervene to settle the matter.

### Origin of United States Potato Grades

In the standardization of agricultural products, the same opposition has been encountered. It was met in the preparation of the legislation under which food control was established and conducted during the war.

The original draft of the Food Control Act contained a section definitely conferring authority upon the United States Government to establish standards for agricultural products. Opposition resulted in its being thrown out.

By argument and persuasion, on the part of one or two members, it was reinserted in two successive forms of the bill, but the legislation, as finally passed, did not convey standardization authority. The bill, however, did convey such broad powers over all handling of foodstuffs that the Food Administration established certain compulsory standards under its power to regulate dealers.

As a result of the investigations of the United States Bureau of Markets, it was decided that the use of higher standards for the home grading of white potatoes would reduce the demands on transportation and would otherwise improve potato marketing and distribution. Therefore, tentative United States grades were prepared and recommended.

The specifications were drawn up after a thorough-going study of potato grading problems. When transportation facilities became over taxed, the Food Administration ordered the universal use of the permissive grades of the Bureau of Markets by all its licensees. These included all wholesale handlers of potatoes. The use of these standards thus became almost universal.

#### Michigan Growers' Experience with Standards

Immediately, a howl went up from many parts of the country, particularly from producers and producer organizations, who insisted that the compulsory use of the grades would ruin them. On one occasion, practically every representative in the Senate and the House from the state of Michigan, accompanied by a committee of growers and organization officers from that state, came to the Department of Agriculture to insist upon the cancellation both of the grades and of the order of the Food Administration requiring their use.

Figures were presented to show how many millions of dollars the application of the government standards would cost the farmers of Michigan. The descriptions of the standards had been so carefully

studied that there was no occasion to yield as to their correctness. Neither would the Food Administration yield in the requirement that they be used. This took place in 1918.

Less than two years afterward, one of the largest manufacturers of potato graders, or sizing machines, was selling in Michigan alone more machines than the entire country had taken a few years before. What has been the result?

Within the past three years Michigan growers have organized one of the most successful cooperative selling organizations in the potato industry. Their "Chief Petosky" brand is kept strictly up to the standard of U. S. No. 1, although the grades are no longer compulsory, and brings a premium regularly wherever known.

### Standards Being Prepared for all Fruits and Vegetables

The Bureau of Agricultural Economics, which includes the former Bureau of Markets of the U. S. Department of Agriculture, is progressing rapidly toward the standardization of all of the principal fruits and vegetables. There are many factors to be considered, and frequently there are numerous widely divergent grades that have been adopted by the trade or local communities. The task of substituting for these local grades for any one commodity, a national standard grade that will apply to the products of all sections, requires much patience and intelligent effort.

Up to 1922, grades for 14 perishable crops were prepared and distributed. These include barrelled apples, peaches, strawberries, cabbages, cucumbers, celery, lettuce, Bermuda onions, northern grown onions, white potatoes, sweet potatoes, tomatoes, cauliflower, and asparagus. It is understood that these are merely permissive grades and are not compulsory.

These standards were adopted by the trade in many instances and some of them have been written into the laws of a number of the principal producing states.

### **HOW PRODUCERS BENEFIT BY STANDARDIZATION**

There is an inclination on the part of the producer to suspect that standards and the application of grades work to his disadvantage. A visit to any great market place where fruits and vegetables are sold, will readily convince him of his error in this respect.

On the auction, in the yards, in the great wholesale houses, and in the retail stores, every minute of the day, graded products are bringing better prices by far than field-run or irregularly graded products. A few specific instances may be mentioned.

### **Graded Onions Return 30% More Than Ungraded**

A few years ago at Laredo, Texas, field-run Bermuda onions of the same character and quality as onions, graded according to the tentative standards of the United States Bureau of Markets were shipped in the same train to the same market and sold.

The returns on the well-graded product, in spite of the inconsiderable amount of culling out that was necessary, were sufficient to pay for all of the work involved in sorting and grading the onions, and in addition, produced 30% more returns to the grower than was returned by the ungraded onions.

### **Losses on Ungraded Potatoes**

Recently the Minnesota Potato Exchange made an analysis comparing expenses, losses, and actual returns of graded and ungraded potatoes.

The loss from shrinkage on the ungraded potatoes amounted to \$80.20 per car.

The loss because of the lower price received for the ungraded stock was \$82.51 per car.

Expenses that would have been unnecessary if the potatoes had been graded, amounted to \$21.13 per car.

Thus, the loss per car was \$183.85.

But, because of not grading the potatoes before they were shipped, it was necessary to pay shipping expenses on the equivalent of five cars that should have been sorted out and left alone. This shipping expense divided among the cars that were shipped, amounted to \$52.46 per car, which must be added to the \$183.85, and that makes a total loss per car of \$236.31!

In the first commercial demonstration of the recommended U. S. grades for cucumbers, carload shipments of U. S. No. 1 grade from Florida brought enough more per package than ordinary ungraded stock to pay for all cull stock, all labor of grading, and a handsome profit.

The profit was so striking and the demand for the graded stock so keen, that in the following season a large group of North Carolina growers built a central packing shed and organized their business on the basis of a U. S. standard graded product.

Does it pay to grade before shipping?

The economies and advantages of standardization are not to be sought solely in better prices. Proper sorting and grading at the shipping point eliminate dirt and low grade products and culls, upon which millions of dollars in freight charges are wasted annually.

Ungraded products are hard to sell, and it is safe to say that the average cost of finding a customer for them is from 10% to 25% greater than the cost of selling well graded products. It is easier to sell a well graded product at a premium than a poorly graded product at a considerable discount.



**Only Graded Products Sell Well at Auction**

The cheapest of all selling methods for some products, and in some respects the fairest and best, is the auction method. The auction can handle to advantage only well graded products since all selling is by sample packages. Lack of the application of standard grades to perishable products constitutes one of the heaviest burdens upon the fruit and vegetable industry.

**The Mechanical and Human Element in Grading**

The uniform sizing of most fruits and of some vegetables can be accomplished by purely mechanical means. Citrus fruits, apples, peaches, pears, all go over and through sizing machines and are separated into lots of fairly uniform weight or size.

But no machine can go farther than this. The separation of poorly colored from highly colored, of symmetrical from misshapen, of wormy or partially decayed from sound, all depend upon the trained eye and the quick and skillful human hand. In the fruit packing house the graders - too often inexperienced girls - sort the orchard-run fruit as it comes from the hopper, placing the various grades or qualities on different belts or conveyors to go through the machine simply for distribution into the proper sizes for the packing crew. Whether or not the output of the house is to be "up to grade" is determined in the very first operation where the human element is all important.

Unfortunately, too many managers think that anybody can grade but that it takes skill to pack, so that the actual grade of the goods is often in the hands of the cheapest "help."

**HOW CONSUMERS BENEFIT FROM STANDARDIZATION**

Some years ago, the Superintendent of Weights and Measures of the State of New York made an investigation of the gain in money to consumers merely

through standard weights and measures as applied to the sale of eight important foodstuffs. The calculations were based upon the experience of his office and the estimated savings for a single year to the consumers of New York, were 15 million dollars.

Snide packages that are short in size and content are a favorite method of robbing the consumer. In a single city of about 100,000 inhabitants, over four million short strawberry tills (trays or boxes larger and flatter than the common quart box) were used in one season. Assuming that these tills were only one-tenth of a quart short, this means that the consumers paid for 400,000 quarts which they did not receive.

This particular swindle is no longer possible, thanks to the passage of the Standard Container Act which prescribes the standard legal sizes of grape or Climax baskets, and of berry boxes, and tills which may be shipped in interstate commerce.

#### Standardization Saves Waste for Consumers

Perhaps the greatest value that the consumers get out of standardization, is in the saving of time and the elimination of waste. The housewife who purchases ungraded apples finds them irregular in size and shape, some partially decayed and wormy. It is little wonder, therefore, that the public in general demands a chance to buy the best quality without the culls and is willing to pay a higher price to secure it. Lower grades can be sold on their merits whenever supplies are short.

#### STANDARDIZATION REDUCES MARKETING COSTS

A loss or shrinkage of 5,000 pounds in a bulk carload of ungraded potatoes used to be quite a common occurrence. This was due to dirt, stones, and culls rejected by the purchaser when the car was unloaded. However, the freight rate on dirt and culls is just as high as on No. 1 potatoes.

On the market, these culls are usually a total waste. If left on the farm, they can often be used for stock food.

The sorting of a carload of produce costs far more when done on the market end than when done at the shipping point. The producer or the consumer, or both, must bear this additional cost.

Because of the uncertainty as to what he is getting, the buyer will offer a much lower price for an ungraded shipment than for one that has been properly standardized.

Add to this the slowing up all along the line because of the unwillingness of the wholesaler, the retailer, and the consumer to purchase without making a careful examination of the product, and you may have some conception of the unnecessary costs that result from careless marketing practices.

### Where Standardization Should Begin

While this lesson is primarily concerned with standardization as related to sorting and packing methods, it is well to bear in mind that it has a broader significance. Standardization should begin with the planting of standard market varieties, and the using of standard methods of production.

By way of illustration, let us consider apples. Between 1804 and 1904, approximately 6,700 distinct varieties of apples, not including crab-apples, were grown in the United States. The catalogs of American nurseries each year, even now, offer about 500 varieties for the grower's selection. With such a huge number of different varieties, it is difficult to find customers who know the value of more than a few.

It is likely that producer, consumer, and marketing agencies would all be far better off if we selected 50 out of this great range of kinds and confined our commercial production to them.

### How to Bring About Universal Standardization

The following steps should be involved in turning out a fully standardized agricultural product for distribution.

1. The planting of well-known market varieties and the elimination of many of the kinds now produced
2. A standardization, so far as practicable, of methods of production
3. The adoption of uniform methods of preparation for handling and distributing the product
4. The classification at the time of packing of the product in accordance with size, quality, and condition standards
5. The use of standard packages and containers

### Grading and Classification

There are two general methods of grading or classification, one of which contemplates the sorting or division of the products into different lots or grades which conform to certain definite specifications. This process is grading as commonly understood. The description to which the graded product eventually conforms is what we call the standard for the grade.

Products may be classified, however, without this careful grading. That is to say, we may have a number of classes into any of which the product may fall as it comes from the field or tree with little or no additional handling. Such a system of classification may answer for the purpose of describing the product which is offered for sale, but it could hardly be made the basis of a contract.

For instance, it has been suggested that, in addition to the United States No. 1 grade for potatoes, which allows not to exceed 6% of blemished or defective stock, there should be a series of grades or classes for potatoes, one of which might contain

10% of blemished specimens, the next 15%, the next 20%, the next 30%, and so on.

Evidently, this would furnish a convenient method for classifying or describing with approximate accuracy the product of almost any field after the stock had passed over the grading or sizing machine. The system of classification could be carried so far that practically any merchantable lot could be assigned to one of the described classes. But it would be impracticable to make a contract in advance for the delivery of potatoes of a class containing between 15% and 20% of blemished stock, since it would be out of the question for any man to stand at the grading machine sorting out a certain number of defective tubers as they pass by, but leaving in between 15% and 20%.

#### Classifications That Are Not Practical

These obvious difficulties have prevented any extensive effort to develop systems of classification for fruits and vegetables which could be applied without any culling or sorting on the part of the producer or shipper to make his product conform to a specific, predetermined standard.

Generally speaking, people who attempt to standardize their fruits and vegetables must expect actually to sort them into different lots, each of which conform to a different and definite description.

#### What the Standard Should Mean

It is desirable that any specific fruit or vegetable standard be so written that the fruit falling within its description will all be of so nearly the same market value that a package or a carload graded to conform to this standard will all be acceptable to the same buyer or the same class of consumers. A standard which admits too wide a variety of specimens defeats its own purpose as a definite measure of value. If too wide a variation is permitted

under a single standard, some packs or shipments may come near meeting its maximum possibilities of excellence, while others may conform closely to its minimum requirements, with the result that there may be considerable differences in the market values of the two shipments. Such an attempt at standardization may be practically wasted effort.

It is clear that a standard so loosely worded as to admit too wide a variety of specimens giving rise to packs of unequal market value, is highly unsatisfactory as a basis for quotations. It is perhaps, more emphatically true with fruits and vegetables than any other farm products that standardization is valuable because it furnishes a basis of quotation which really means something to the shipper.

To tell a man that boxed apples are selling in a certain market at from \$1.25 to \$3.50 per box is to give him very little idea as to what he may expect for a shipment of any particular quality, but to quote Extra Fancy Winesaps of a certain size or count at "\$3.25 to \$3.50, mostly \$3.40," is to give very definite and specific information which may be valuable as a guide in his marketing operations.

#### The Element of Size May Best Be Stated Separately

In early attempts at the standardization of fruits and vegetables, the element of size was usually considered one of the most important. The handlers of almost any class of fruits and vegetables have in mind a certain size or certain range of sizes which they associate with a number one grade. In the case of most products, very small specimens are never considered by the trade as number one. In many products, however, oversize specimens are heavily penalized.

There are exceptions to this rule, however, and shippers of well-graded boxed apples from the western states have distinguished between grade and size and will pack and quote "Extra Fancy" apples

of a specific variety in a number of different sizes or counts. In this case, the grade name indicates the quality only, while the size is separately stated. There are many reasons to believe that this is the correct principle of standardization in fruits and vegetables, and one which is certain to be more and more generally recognized.

### U. S. Standards for Potatoes

This idea had not gained general recognition when the United States potato grades were formulated and recommended. U. S. No. 1 potatoes must meet certain requirements as to quality, which is determined by such factors as: general conformity to recognized varietal characteristics, freedom from injuries, defects, and so on.

The standard for the U. S. No. 2 grade admits smaller potatoes than that for U. S. No. 1, and also admits potatoes showing certain defects in quality or condition which are excluded from U. S. No. 1. There is no upper limit to the size in either grade. The No. 2 grade, therefore, having a smaller minimum size limit may contain potatoes with greater variation in size than can occur in the U. S. No. 1. It follows that if one lot of potatoes is uniformly too small to be graded as No. 1, they may still all meet the minimum size requirement of U. S. No. 2. There may be absolutely no difference in quality as shown by maturity, freedom from dirt, injuries, deterioration, and defects, the difference in grades and market value being determined by size alone.

On the other hand, a lot of U. S. No. 2 may be composed entirely of potatoes of extremely large size, but carrying certain defects or blemishes not permissible in the higher grade.

Evidently two such lots of No. 2 potatoes have few elements of value in common and for this reason, the U. S. No. 2 grade when quoted without further description of the stock offered, is an exceedingly unsatisfactory basis of sale.

The recent addition of a grade, U. S. No. 1 Small, is a recognition of the fact that the original effort to include both size and quality in the standard for each potato grade was a mistake.

### What "Grade" Means

The tendency at the present time is to use the word "grade" as a description of quality and to describe the size of the product offered by a separate statement, such as maximum or minimum diameter, maximum or minimum weight per specimen, or by the number of specimens in a package of given size.

### Cabbage Grades

A recent instance of standardization in which practicable grades were found possible only after this principle had been recognized, is afforded by the cabbage grades. The lot must conform to certain quality requirements to be of U. S. No. 1 grade, but the information concerning the average size of the stock in any given shipment is covered by a separate statement.

The introduction of this principle has been a great help in clearing up the difficulties which have been encountered in the effort to devise suitable standards for many of our vegetables. In many cases, the ideas of producers and of the trade in different parts of the country, vary so greatly as to the size permissible in No. 1 grade that it is practically impossible to get the trade together on any national standard under which the grades include both quality and size.

### Necessity for Occasional Revision

Since the standardization and grading of fruits and vegetables can never be an exact science, it is desirable that all systems of standardization be permitted to develop with the industries and the products to which they are applicable and that they be not written in the law.



The system of standardization devised for the products of one locality and perfectly satisfactory at the time for most of the goods coming on the market, may be quite inapplicable to the products of other regions in which the industry may later become of commercial importance.

New varieties may also require new standards or a modification of old standards in order that they may be included.

For example; a suggested set of grades for sweet potatoes, worked out to meet the needs of the type most prevalent in the Chesapeake Bay and New Jersey region, and which for many years has been most in demand and in largest supply on the northern markets, was found to be quite inapplicable to another variety which later became of commercial prominence in one of the gulf states. The choicest specimens of the latter attained a length in proportion to diameter which the trade would instantly have associated with inferior quality had it occurred in the northern grown stock.

The foregoing does not imply, however, that anything is to be gained by frequently revising and modifying the standards for any one product from any one community. On the other hand, everything is to be gained by the most tenacious and rigid adherence to a standard once established if it has been found to furnish a satisfactory basis for quotation, inspection, and sale.

#### Standardization and Reputation

The more rigidly a community or organization adheres to a satisfactory commercial standard, the more valuable will its reputation become. Its brands and trade-marks will almost certainly be valued and honored in the market in the exact proportion to the strictness with which its grade and pack conform to its printed standards.

In the marketing of no farm product is the element of trust or confidence more important than in

the marketing of perishables. Deals involving immense amounts of money must often be consummated without any opportunity to draw up a written contract. The trade methods for preventing abuse and for adjusting disputes are confessedly imperfect and unsatisfactory at best, but just so far as honest and consistent standardization has been accomplished and so far as impartial, intelligent inspection of these products is available at both ends of the line, just so far are the dangers and difficulties minimized.

Brands and trade-marks are valuable only as an indication of the quality and uniformity of the products sold thereunder. This uniformity can be maintained only when the grade to be packed under the trade-mark or brand is determined by a written description which thereby becomes a standard.

#### Does a Brand Name Insure Standard Products?

The statement which is sometimes heard that certain brands "are not what they used to be" simply means that the shippers never reduced their standard to writing, or have deliberately failed to live up to it. The difference between selling standardized products and selling products under a brand or trade-mark comes in just at this point.

The standard for a No. 1 or a No. 2 grade when reduced to writing can be read intelligently by everyone in the trade. On the other hand, a brand or trade-mark may have an excellent reputation and may never be used upon any but superior stock, yet there may exist no better standard for the goods to be packed under this brand than the conception in the minds of the growers or packers who ship thereunder.

Manifestly, there is much greater danger that the quality of the products shipped under a brand or trade-mark will vary than that a similar variation will occur in goods shipped under specific grade names. If the recipient of goods under a brand or

trade-mark is disappointed in their quality, he can do no more than to express his own judgment and the judgment of such witnesses as he may call in as to how far this particular shipment falls short of the quality which he has a right to expect under that particular brand or trade-mark.

The whole case rests upon habit, reputation, tradition, and expectation. One buyer who has been disappointed in the quality of goods received under a certain brand may lower his offers on that brand in the future. Another buyer who has received uniformly satisfactory shipments on the same brand may still be willing to pay a premium for it.

Sometimes, indeed, shippers knowingly send out different qualities under the same brand or trade-mark, but ship all of the lower qualities to certain markets expecting that there will be a considerable difference between the price paid for their brand in that market and the price paid in other cities to which only superior goods are sent.

In this case, the shippers are evidently trading on their reputation and are not really handling standardized goods. For these reasons, brands and trade-marks furnish a very unsatisfactory basis for official market quotations.

#### INFLUENCE OF THE UNITED STATES FOOD AND DRUGS ACT UPON STANDARDIZATION

The Food and Drugs Act, and particularly an amendment to it passed in 1914 and usually referred to as the "Net Weight Amendment," has played an important part in the standardization both of the quality and the quantity of food when sold in package form.

The Net Weight Amendment, Section 8, provides that articles shall be deemed to be misbranded if, in package form, the quantity of the contents be not plainly and conspicuously marked on the outside of the package in terms of weight, measure, or numeri-

cal count; provided, however, that reasonable variation shall be permitted, and tolerances, as well as exemptions as to small packages, shall be established by rules and regulations made in accordance with the provisions of Section 3 and of this Act.

As a result of this law, all boxes, barrels, crates, baskets, or food in package form entering into interstate commerce must be marked with the quantity of the contents in terms of weight, measure, or numerical count, subject to such modification of the general principles as may be worked out by administrative interpretation and under such tolerances as may be prescribed as reasonable.

Thus far, shipping containers have not been discussed in this section. For instance, potatoes in sacks, when the sacks are not used as a unit of quantity but only as a convenience for handling, are not required to be marked. However, when they are sold by the sack instead of by weight or measure, they are required to be marked.

Students should familiarize themselves with the Net Weight Amendment as well as the Food and Drugs Act, and particularly with the rules and regulations of various kinds that have been issued governing the requirements as to marking of containers.

### STANDARDIZATION OF CONTAINERS

Thus far, Congress has passed two laws standardizing containers.

The National Standard Barrel Law of 1916 fixes as a standard of measure, a three-bushel barrel of the following specific dimensions:

- Length of stave, 28 1/2 inches
- Diameter of heads, 17 1/8 inches
- Distance between head, 26 inches
- Circumference of bilge, 64 inches, outside measurement
- Thickness of stave not greater than .4 inch

Provided that any barrel of a different form having a capacity of 7,056 cubic inches shall be a standard barrel. The same law fixes a standard for a smaller barrel to be used for shipping cranberries.

### The U. S. Standard Container Act

The second law standardizing containers is known as the United States Standard Container Act, a title far too comprehensive in view of the fact that only a relatively small number of containers are affected by its provisions. This Act specifically sets a standard for 2-quart, 4-quart, and 12-quart "Climax" baskets. It also provides that the standard basket or other container for small fruits, berries, and vegetables shall be of the following capacities:

Dry half-pint

Dry pint

Dry quart or multiple of the dry quart

The dry half-pint is required to contain 16.8 cubic inches, the dry pint 33.6 cubic inches, and the dry quart 67.2 cubic inches.

The law depends for its effectiveness upon the fact that it makes unlawful the manufacture for shipment or sale of containers of the character named in other than the standard sizes.

### The Need for Standard Sized Containers

Much remains to be done in the standardization of shipping containers.

There are in common use today about 40 styles of cabbage crates, 30 styles of lettuce boxes or crates, 20 styles of celery crates, 50 styles and sizes of hampers, 15 styles and sizes of round stave baskets, and market baskets varying in size from 1 quart to 24 quarts. A very small proportion of these sizes would meet the requirements of the trade.

### Standardization a Means, Not an End

Standardization is an essential part of good merchandising in the fruit and vegetable industry, but is a means and not an end. The shipper or the community which sends standardized fruits and vegetables to market has laid the foundation upon which reputation may be built. But it avails relatively little to pack these perishable products in accordance with specific and definite standards if the goods are not to be suitably advertised or handled through dealers who will bring their superior and uniform quality to the attention of the right class of buyers.

To be effective, standardization must be followed up by efficient inspection, by proper physical handling of the goods in transit, in storage, and in distribution, by proper segregation of varieties and grades in commercial shipments, and by all of the other practices which distinguish sound business methods from careless and inefficient marketing practices.

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### YOUR PROTECTION AT MARKET

You may go to a great deal of trouble to grade the products you send to market and then find that after your shipment arrives, the buyer disagrees materially with your judgment as to the grades.

What recourse have you?

Who will arbitrate for you?

How can you prevent loss due to such disagreement?

There is a way, and the method has proved most successful. Furthermore, the man who conducts the next lesson is the government official who supervises the official inspection that protects shippers of fruits and vegetables. You have a right, therefore, to look forward with anticipation to the lesson on inspection that follows.

## GLOSSARY OF MARKETING TERMS USED IN THIS LESSON

field run produce, Produce as it is harvested from the field, without being sorted or cleaned.

grading, n. The sorting or dividing of products into different lots or grades, each of which conforms to standard specifications.

grading machine, A machine that sorts articles according to size.

orchard run, Used to describe fruit that has not been sorted or graded after picking.

pack, n. A particular method of arranging fruit or vegetables in containers, usually with the idea of the products being firmly held in position, and also with the object of making the products as attractive to the purchaser as possible.

permissive grade, A grade, the description of which has been suggested usually by a state or the national government, but which description cannot be forced upon anyone. A permissive grade is merely a suggestion, but its use is usually strongly urged upon those who have farm products to market.

prune, v. To remove the excessive branches and twigs of a tree, either to improve the tree's appearance or to increase the production of fruit by encouraging the tree to use the sap for producing fruit instead of wood.

snide package, 1. Package in which the products are so arranged as to deceive the purchaser who does not make a thorough inspection of the entire contents. 2. A package so made as to appear to contain more than it really does; either a false bottom may be used or the bottom may be raised higher than would be expected.

thin, v. To remove a part of the fruits or plants in an orchard, or vineyard, or garden, to allow for the greater development of the remaining fruits or plants.

till, n. A tray or box larger and flatter than the common quart box, which is nearly cubical.

tolerance, n. Variations above or below the standard grade specification, within which limits the product may still legally be classed as of the grade specified.

trade-mark, Any symbol, mark, name, or other characteristic or arbitrary indication secured to the user by legal registration. The trade-mark is used to distinguish goods from the goods of competitors.







# Inspection of Fruits and Vegetables

BY WELLS A. SHERMAN



MARKETING FRUITS AND VEGETABLES  
LESSON 3

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### HOW TO STUDY THIS LESSON

To get the most from this lesson, it will be necessary for you to maintain the viewpoint of a shipper of fruits and vegetables. If you have not had the experience of shipping to a wholesale market, either to a commission man, to an auction company, or to a broker, it is entirely possible for you to develop the viewpoint of a shipper who has had such an experience.

Just remember that after the products leave your station, you have very little control, especially over the price they will bring; and also, you have little control over the grade into which the products will be considered to fall.

Suppose, for example, that you ship what you believe to be No. 1 peaches. You may have had a broker negotiate the sale for a carload, and a wholesale dealer may have promised to pay you \$2 a bushel, specifying that this price is to apply to No. 1 peaches. When the carload arrives, the buyer may refuse to take them on the grounds that they are not up to standard.

You, however, live 1,000 miles away. What can you do about it? Just realize the seriousness of such a situation as you study this lesson, and you will then appreciate what you learn here much more.

Many jobbers consider the matter of inspection to be the most important feature, from a standpoint of protecting the grower, and indeed, poor inspection, or lack of inspection has many a time resulted in the grower losing very heavily on his shipment.

The lesson may be studied as a whole. Read it through once and get the general idea; then go back and study it paragraph by paragraph, endeavoring as you study, to determine just how the facts can be applied in shipping either fruits or vegetables.

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# INSPECTION OF FRUITS AND VEGETABLES

BY WELLS A. SHERMAN\*

[Don't, under any circumstances, start your study of this or any other lesson before you have read carefully all that precedes the beginning of the lesson itself. Some students have failed to follow the study suggestions and so have failed in their answers to questions.]

No concise definition of inspection as employed in the handling of fruits and vegetables, can be given which will be applicable to all products or to inspection in all stages of marketing. Generally speaking, inspection involves an examination of a product to determine to what extent it conforms or fails to conform, to a grade or standard. The grade or standard upon which the inspection is based may have been reduced to writing, or it may be a very definite or a rather vague conception of what the quality or appearance of the product should be.

## THE OBJECT AND TYPES OF INSPECTION

The object of inspection may be to determine in advance of the harvest, approximately the grade or quality of the prospective product in order that intelligent arrangements may be made for its sale.

Thus, we have a careful pathological inspection of potato fields during the various stages of growth when an effort is being made to produce seed stock, sufficiently free from diseases and admixture of other varieties, to warrant its sale as certified seed.

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\*In charge Fruits and Vegetables Division, Federal Bureau of Agricultural Economics; for complete statement of his experience, see Lesson 2.

If the inspection reveals a condition which will disqualify the product of the field, arrangements must be made to dispose of the product on the general market, or possibly as uncertified seed stock of somewhat better than average commercial quality.

### Inspection for Pest Control

Closely allied to commercial inspections of this type are the inspections for crop pest control which are provided for by law in many states. The objects of such inspections are two-fold: First, to safeguard the producing industry by preventing the rapid spread within a state or community of insects and diseases injurious to tree, plant, or fruit; second, to protect the commercial reputation of the community in the markets of the country by preventing the shipment of products that might prejudice the trade against the regions from which they come.

The important point for a student to remember concerning all such inspections is that they are designed only to secure the conformity of the goods to certain minimum requirements as to approximate freedom from specific diseases or from specific pests.

In very few cases, if any, do they guarantee sufficiently close conformity to any commercial standard to give them much value as a basis of trade. This is almost self-evident, because, of necessity, all the shipments from the state or region in which the inspection is operating must meet at least these minimum requirements. In other words, police or regulatory inspection can furnish no basis upon which to establish a scale of prices applicable to products so inspected.

### Commercial Inspection Determines Trade Values

Commercial inspection of the harvested product is, in most cases, designed to enable the shipper or receiver to distinguish intelligently between the



commercial values of different lots. It is purely a commercial service and an absolutely necessary step in the merchandising of any perishable goods being sold on contract as of a specific grade or with the requirement that it meet certain specifications. Upon the efficiency and integrity of commercial inspection, often hinges the honest carrying out of the most important contracts.

It is hardly too much to say that the reputation of whole communities as shipping units, the success or failure of the largest deals in the fruit and vegetable trade, the very life of cooperative marketing organizations among fruit and vegetable producers and sometimes even the regard of the people for an important official agency depend upon the efficiency and integrity of official inspection forces.

### THE BASIS FOR INSPECTION

The foregoing general statements lead us inevitably to the conclusion that any intelligent, systematic, and effective inspection must be based upon prior standardization of the product. In other words, the development of commercial inspection cannot precede, but must follow the development of standardization in the marketing of perishable products. As fast as definite standards are agreed upon and understood for any class of products, just so fast and no faster can we develop a uniform and dependable system of inspection for these products.

Little is to be gained by the successive examination of any commercial lot of fruits or vegetables by producer, by packer, by shipper, and receiver if each has in mind a different idea as to what should constitute a No. 1 or a No. 2 grade, or just what should be included or excluded from stock packed under any particular grade, name, mark, or brand.

### Element of Judgment in Inspection

Most fruits and vegetables are highly perishable, many of them being subjected to very rapid changes in appearance, quality, and condition during the process of marketing. For this reason, they present more difficult problems of standardization than are involved in the cases of less perishable products such as cotton and grain, and correspondingly greater difficulties in the matter of inspection.

Standards for fruits and vegetables must usually be devised with a view to describing as accurately as may be possible specific sizes or qualities at the time of shipment. Within certain limits, these standards furnish a measure of value and the object of inspection is to determine whether the product as it comes from the packer, the grading machine, or the field, conforms to the standard in such a way that the grade furnishes a fairly definite indication as to its value.

### Characteristics Differ in the Same Variety

Everyone knows that the same product and even the same variety, shows marked differences in characteristics when produced under different conditions of soil and climate. The appearance of the fruit from the same tree may vary greatly from one season to another if there is an unusual amount of rainfall and cold weather in one season and an unusual amount of sunshine with a scarcity of moisture in another.

The natural gradations of color, of size, of maturity, and of general appearance are so gradual in many fruits and vegetables that it is frequently impossible to subject them to accurate and uniform measurement.

In writing the specifications for grades and standards, we cannot escape the use of such terms as "practically free," "free from serious damage," "characteristic color for the variety," etc.

No matter how carefully these terms may be defined, there is always room for a difference of opinion between the expert graders and inspectors as to exactly where the line should be drawn which puts a particular specimen in the grade or out of the grade.

For this reason, one of the most important ends to be sought in the organization and maintaining of any inspection force or service is the bringing together of the minds of the members of the force upon a common understanding and interpretation of these expressions.

The most acute problem therefore, of the man who is responsible for commercial fruit and vegetable inspection, is to maintain from day to day, the greatest possible uniformity in the interpretation and application of standards by his inspection force. If the inspection has been rigid and uniform for a succession of seasons, valuable reputation for the organization will almost inevitably have been established.

#### Uniform Grades Necessary to Success

Certain buyers will have become regular customers because of the uniformity with which the organization's standards have been upheld. Every season is likely to see some changes in the personnel of any inspection force, and the large shipper or association employing these inspectors encounters one of the most serious marketing problems, in the difficulty of carrying over from year to year the same conception of grade and quality in the minds of the inspectors.

While written rules may remain absolutely unchanged, it is easily possible for a gradual change of interpretation to creep into the minds of any group of inspectors.

In such a case, big receiving houses will be likely to detect the decline in the quality of the

inspection service more quickly than the shipper or the organization by whom the inspectors are employed. Though the grades have remained unchanged and may be as suitable as ever for the shipper and receiver, the change in the quality and character of the inspection may easily disrupt established and settled business relationships.

It is evident that no formula can be laid down for overcoming this basic and continuing difficulty in securing an ideal inspection service for fruits and vegetables, but it is also evident that the difficulty can be minimized by securing the greatest possible stability and permanence of personnel in every inspection force.

Experienced inspectors should not be promoted or transferred to other work until their prospective successors have been thoroughly drilled in the methods and viewpoints of their employers. Only in this way can the inherent difficulty of overcoming the personnel element in fruit and vegetable inspection be even measurably solved.

#### When Is Inspection Needed?

It has been stated that an inspection of perishable products may be made at many different steps in the process of production and marketing, and that the inspections made may have many definite, specific, and immediate objects. No list which may be given of the stages at which inspection may be necessary or desirable for the specific ends to be served will be complete as to certain products or as to the trade practices of certain localities.

The idea that systematic inspection is essential to efficient marketing is new to the growers and shippers of most of our perishable products. With the growth however, of more exact and business-like methods on the part of shippers, there has come the necessity for a modification or alteration of the systems of inspection in the receiving markets.

The following partial list indicates only an outline of the widely varying conditions under which commercial inspection is desirable or necessary to protect the interest of the grower, cooperative organization, independent shipper, car-lot distributor, auction company, jobber, or retailer.

### METHODS OF INSPECTION

The efficient and impartial inspector must use every possible means to maintain uniformity in his own actions and decisions. When there is a question as to the size of the product such as apples, peaches, onions, or potatoes, he will use a series of metal rings of the required diameter or a sheet of metal, wood, or fiber board with holes of specific sizes to meet grade requirements. Doubtful specimens will be tested, one by one, until a sample of given weight has been sorted and accurate count made to determine the percentage of undersize.

Scales are also used, for in many cases the proportion of defective specimens must be expressed in a percentage by weight.

In the inspection of watermelons, the average weight of the melons in the car is often the chief point to be determined. This is found by weighing each of several adjacent melons, taken from the top down to the bottom layer in the car. Four different points are selected in the car for such vertical sampling and weighing. A fair average for the car can then be struck.

The inspection of cabbage involves finding the average weight or the range in weight of the heads in addition to determining solidity, maturity, degree of yellowing or wilting, closeness of trimming, and other grade factors.

The exact methods of procedure differ for nearly all products. In many cases much difficult labor is involved, as in inspecting barrelled apples, when

the heads must be taken out, examination made to the center of the barrel, the apples replaced, and the barrel re-headed without the aid of the machinery or press originally used.

Inspections at the market are often made to find the extent of freezing injury which may be general or confined to one part of the car. Again it may be to learn the extent of decay occurring irregularly throughout the load. In this case, the inspector should have some knowledge of fruit and plant diseases so that his report may show the exact cause of the trouble. This often fixes responsibility either on the carrier or on the grower.

All this indicates the judicial nature of an efficient and reliable inspection. It follows that a good inspector must be careful, accurate, and honest.

#### HOW GROWERS BENEFIT FROM INSPECTION

The grower who has produced fruit of superior quality to be sold through a cooperative organization which packs his product according to definite grades, is paid for his fruit on the basis of the percentage of the various grades which it contains.

These grades presumably remain unchanged from year to year, but the actual proportion of any particular lot of fruit which goes into the highest grade will depend upon the interpretation of the grade by the inspectors, and upon the efficiency of the inspectors in their supervision of the work of the individual packers.

It is a matter of financial importance to this grower that the inspection be such as to insure him that the packers will actually obtain from his fruit the percentage of fruit of the higher grade which it actually contains.

### Why Inspection Makes Cooperative Selling Fair to All

If the sales of the products of many growers are to be pooled according to grade, the grower who has produced an unusually large proportion of high grade fruit will be made to lose money, if the inspection is so loose or inefficient as to add to the higher grades too much of the inferior fruit which may predominate in his neighbor's orchard.

If the inspector allows more than the largest permissible number of defects in every grade, advantage will be given to those growers who have been least successful in producing fruit of exceptional quality. The man who has produced fruit of exceptionally high grade will suffer by having his product pooled in a system of packing and inspection which does not adhere strictly to properly drawn grades. Stringent inspection based on proper grades will result in a more valuable product, and in a pool which will be just to all concerned.

Briefly stated, then, the grower of exceptionally good fruit is extremely interested in a rigid and systematic inspection, in order that he may receive credit for the quality of the goods he has produced and that he may not be penalized by selling in a pool with producers who through carelessness or misfortune, have produced a product of lower quality.

### Machines Can Grade for Size Only

A dealer may have contracted for the sale of a large quantity of potatoes of U. S. No. 1 grade to be shipped from a certain territory during the digging season. The majority of the growers may be without suitable storage facilities and therefore eager to sell most or all of their crops as fast as dug.

The dealer may quote by phone from time to time, the price which he will pay for U. S. No. 1 stock, f.o.b. cars at the farmer's siding. The farmer may

have provided himself with a grading machine which, when properly operated, will insure proper sizing of the stock, but no machine can pick out the blemished stock, that is to say, badly mis-shapen potatoes or those showing deep growth cracks, second growth, cuts, deep scab, or other defects which exclude them from this grade.

The grade of the potatoes as they fall into the sack behind the grading machine is dependent quite as much upon the judgment and efficiency of the people, who pick out the defective stock as it comes over the shaker or carrier, as it is upon the character of the product as it comes from the field.

A field run sample may contain only 10% of blemished stock, but the men who work beside the grading machines may be so inefficient that the finished product will still contain 8% of blemishes and fail to meet the requirements of the U. S. No. 1 grade.

#### Grading Always Depends on Judgment

From another field may come similar potatoes containing 12% of blemished stock, but the machine crew pick out one-half of these defective potatoes, bringing the stock just within the requirements of the grade.

A third field may produce 15% of blemished stock, but the machine crew of this particular farmer may be wide awake and under strict instructions to put up nothing but a No. 1 grade. They may catch four out of every five blemished potatoes coming over the screens, in which case the sacked stock behind the grader will show only 3% of blemished stock and this farm, because of the efficiency of its grading, will deliver the best commercial product of the three.

The three growers who have obtained these three different results, may all deliver their product to the same buyer. If each grower loads a separate car and the inspector who acts for the buyer is



thoroughly competent, fair, and uniform in his work, he will accept two cars and reject the other or accept it only at a reduced price and for delivery on some other order.

#### Inspection Must Disclose All the Facts

If he reports all the facts to his employer, attention will be drawn to the man whose delivery shows only 3% of defects. He will probably get no more for that particular car than will the man who delivered a grade in which he took advantage of the full 6% tolerance.

The dealer, however, may have a certain number of select customers who will pay him a premium for especially clean stock. His inspector's report will direct his attention to the farmer whose grading is most efficient and this man will be sought and, if necessary, offered a premium to load another car of equally good quality when such an order is received.

The careful grower is, therefore, interested in the efficiency of the inspection conducted on behalf of the buyer because of the attention which it will direct to the superiority of his product.

If, on the other hand, the inspector is inefficient or indifferent to the interest of both parties, he may accept all three cars, depending upon the good to offset the poor, making no discriminating report to his employer. This would be a direct discrimination in favor of the careless producer and against his more efficient neighbor.

#### Inspection Discloses Irregularities

If three growers combine to load a car in which the sacks of each are identified by some distinguishing mark, the grading may be even more irregular than in the case just cited. One man may have delivered an average of 12% or more of blemished stock, another an average of 5% or 6%, and another only 2%. If the proportions of their deliveries are somewhat

irregular, the car may average within grade, if the good be allowed to offset the poor.

If the inspector allows this to happen, the discrimination against the careful grower is even more pronounced. He is then required to stand the loss of the defective stock which he has removed, only that his neighbor may sell a large proportion of such defective stock. The car as a whole will be regarded as irregular and, therefore, not entirely satisfactory by the final recipient. A truly efficient inspection in such a case would require a separate report on each set of sacks, with the information that the car as a whole was so irregular that its delivery upon grade, should not be attempted until certain marks or brands were replaced by better stock or reconditioned.

#### How Associations Benefit from Inspection

Evidently, the cooperative association must have at least a three-fold interest in the inspection of the products which it handles; first, as a means of doing quick justice to its various members in the pooling of their products and the distribution of the proceeds; second, as a means of maintaining uniformity in the quality of the products which it delivers from day to day, from month to month, or from season to season to its regular customers; third, as a basis for loss or damage claims in case of trouble in transit for which the carrier may be responsible.

#### Why Grades Must Have Uniform Interpretation

The association also has a vital interest in the character of the inspection which the receiver employs, upon the receipt of goods which the association may have sold f.o.b. It is not sufficient that inspection be made at both ends upon the same set of grades. There must be a similar interpretation and application of these grades. If business is not to be subjected to unnecessary risk, the human element must be eliminated or reduced to the least possible minimum.

The inspector for the association or shipper, and the inspector for the buyer or receiver, should see the product eye to eye, and their minds should meet as to how it should look and what the packages should or should not contain.

In view of the diversity of financial interest between these two parties, changes in market prices may cause large sums of money to hinge upon the interpretation and application of a written grade.

Manifestly, there is an almost unsurmountable difficulty in bringing about uniformity of thought and action on the part of employes of principals whose interests may be opposite. This is the basic condition which has given rise to the need for impartial, official inspection in the fruit and vegetable industry.

#### THE COMMERCIAL MARKET MAN'S INTEREST IN INSPECTION

In discussing in preceding paragraphs the interest of the several potato growers in the inspection of products at their loading points, we have incidentally explained in part the importance of inspection in the business of the merchant who buys from the grower and ships to distant markets.

He has, however, a further problem in that he must often operate over considerable areas, buying through a large number of employees with whom he may seldom come in contact. If this dealer has attempted to fill a large order for U. S. No. 1 stock, it is of the highest importance to him that his various local buyers who must act as inspectors, shall be uniform in their interpretation and application of grades.

He may fail to fulfill a most important contract if even one of his buyers fails to inspect properly. He may also be subject to annoyance, delay, and possible loss, if there is incompetent inspection at the receiving end, which results in unjustified refusal of stock shipped on contract or unwarranted

claims for allowance for stock which is alleged to be below the grade specified.

Manifestly, we have the same basic difficulty here as in the other cases cited. The remedy lies not in arbitration, which in the case of highly perishable products cannot take place before the products themselves have gone into consumption or become an utter loss, but in a system of inspection which is at once, authoritative, impartial, and alike at the shipping and receiving ends.

#### What Inspection Means to the Car-lot Receiver

The car-lot receiver whether he buys a product outright or handles it for the shipper, has an interest in the integrity and thoroughness of every inspection of the goods which may have occurred before they came into his possession. If he is fully advised of the results of each of these inspections, his further operations are simplified and expedited.

If he has confidence in the original inspection for grade, his own inspection of the goods will be chiefly for condition. That is to say, for the purpose of determining to what extent decay has occurred or maturity changed since the product left the shipping point or what mechanical or other injury it has suffered in transit.

As a result of this inspection he may make a claim against the transportation company. If the amount is large, this may involve considerable controversy with evidence submitted on both sides resulting either in a compromise or a lawsuit.

No matter what the character or standard of an inspection at shipping point, it can seldom be conclusive in any case as a measure of the loss or damage sustained in transit, until supplemented by a qualified impartial and authoritative inspection upon receipt. Here again, the trade has realized the

insufficiency of its own machinery which is now supplemented in a measure by inspection through various official agencies.

#### Why Many Cars Must Be Re-inspected

The receiver, however, must, in many cases, re-inspect the goods for general conformity to grade before he will dare to deliver them to his best customers. Such inspection may not form the basis for any further communication, and the shipper may never know that such inspection has occurred.

Nevertheless, if a car received by a buyer, shipped by a cooperative organization, contains extra fancy Jonathans from the orchards of several different growers, the order as a whole may be accepted without protest, yet the products of certain growers may be sold to customers to whom the receiver would never attempt to deliver the products of other growers received in the same car and accepted as of the same grade.

In other words, the inspection of the receiver, must, at times, be even more discriminating than that of the shipper, amounting in fact, to nothing less than the differentiation between qualities or values which may occur within a single grade.

The receiver also has an interest in, and must often secure, an inspection which is exact and painstaking. This may be to furnish the basis upon which to calculate the amount of allowance, or rebate which he should receive from a shipper due to failure to pack exactly according to grade. Again, there may be a difference in opinion as to the value of stock which is recognized by both parties as being below grade or of unclassified quality.

His claim against a transportation company may be based upon over-ripeness or partial decay, due to delays in transit. Only the most painstaking and impartial inspection by men who understand commercial values can form an equitable basis for such a settlement.

### How Shippers Can Be Convinced of Fair Deductions

If the car-lot receiver is a commission merchant, he must often call in some disinterested agency to make an inspection in order that the shippers may be convinced of the true condition in which their products have arrived on the market. Such a house operating on a large scale must have its own inspection force to examine before unloading and to report on the general character and quality of goods received, especially when the conditions of trade in the city are such as to make it practicable to transfer certain quantities of goods directly from the cars to jobbers or other purchasers.

Inspection may also be necessary in many cases in which the products may arrive in such poor condition, or may be of such low quality, or may have encountered such low prices that it is questionable whether the shipment can be sold for enough to pay the freight. The receiver may in this case, be compelled in self-defense to decline to receive the shipment and leave its disposition to the transportation company.

### Inspection Necessary Before Diversion

In the case of either the buyer or commission merchant, an inspection of the car while the load is still intact may be necessary in order to determine whether products and packages are in such a condition as to warrant the diversion of the car to another market or its sale as a whole for delivery at some relatively distant point.

In this specific case, the element of honesty and fair dealing is not likely to be involved but the inspection, to be efficient, must be made by men who have an intimate, practical acquaintance with the ripening process of the products inspected, their carrying qualities and with their general condition as commonly judged by the trade.

The loss of an entire car may easily result from an error in judgment on the part of such an inspector

who believes that the product can stand another three day's journey, when in fact, the process of ripening or deterioration has reached such a point that upon delivery at the proposed market, the goods may be practically unsalable.

### Inspection Necessary Before Selling at Auction

The commercial auction companies which handle fruits and vegetables on a large scale in many of our important markets, usually offer their facilities only to shippers who have personal representatives on the ground. This means that the patron of an auction must ship his goods consigned to his own employee or to some broker or car-lot receiver employed or commissioned to represent him.

Naturally this representative must be entrusted with some discretion, and although a shipment may have been sent to him to be offered at auction, he must inspect it at least to the extent of determining whether or not its physical condition is such that it is likely to sell for a satisfactory price at auction.

Sales at auction are made on the basis of samples displayed for examination by prospective bidders. The samples are supposed to be so selected as to be typical of the lots offered.

If a shipment contains many packages of partially decayed stock it may be impractical to offer it at auction without considerable re-handling. The display of a line of samples containing one or more boxes of partially decayed fruit would put all buyers on their guard. Few would be willing to purchase except at prices which contemplate considerable loss from decay. Buyers generally play safe when bidding with the result that a shipment in poor condition may sell below its real value.

In such a case, the result of the inspection on the part of the receiver may be to cause the products to be sorted and sold on "the street" through com-

mission merchants to the jobbing and retail trade where buyers can examine their purchases, package by package, each lot being sold on its merits.

The auction company must know that the samples it displays fairly represent the lot from which taken. This involves an inspection for the protection of its own reputation as well as for the protection of its patrons.

#### Inspection By or For the Jobber and Retailer

The U. S. Department of Agriculture describes the jobber in the fruit and vegetable trade as the man who buys in car-lot quantities or less and sells by the hundred pounds, barrel, box, etc., or multiples thereof to the retail trade.

If the jobber buys a carload, his interests in the inspections which may have preceded his purchases are practically identical with those of the car-lot receiver described in a preceding paragraph.

If, however, he has standing orders from certain customers for certain quantities of goods of known quality, the fact that the car as a whole has passed inspection as of a certain grade, does not tell him all that he needs to know. Whereas, all previous inspections may have been made by sample and applied to the entire car, it may be necessary for him to conduct an inspection which will include a much larger percentage of the packages delivered.

It may be necessary for him to select for certain customers with reference particularly to the state of ripeness of the product, or with reference particularly to high color, or exceptional freedom from some particular blemish or defect.

To the jobber, it is of especial importance to know whether the carload or half carload which he may be purchasing, is uniform throughout or whether the different marks or brands of which it may be com-



posed or the names of the different growers upon the sacks or boxes indicate measurable differences in quality.

The unfairness and inefficiency of an inspection which averages widely differing lots in the car and calls the whole "up to grade" is well illustrated in case this lot is purchased by a jobber.

### Inspection Must Insure Uniformity

If the jobber has received a report stating simply that this car is of U. S. No. 1 grade and proceeds upon the assumption that its contents are uniform, he is likely to get into serious trouble if he happens to sell to a retailer two sacks of stock containing only 2% or 3% of blemishes and one other sack carrying 12% of blemishes.

The retailer, if he happens to empty and sell the best two sacks first is likely to hear protests from his customers when he begins to sell them the poorer stock. It does not ease his situation to tell him that if he had emptied all three sacks and mixed them together, his product would have come within the requirements of the No. 1 grade.

What is actually likely to happen is that the retailer will empty and sell one sack at a time. If the sack containing only 2%, or 3%, or at most less than 6% of blemished stock, there are likely to be so few undesirable potatoes in the peck or half peck delivered to the individual consumer that no protest will be heard. But when he begins to serve from a sack containing 12% or more of scabby, rough, ill-formed, or badly-cut potatoes, several individual consumers are likely to receive small lots containing a heavy proportion of potatoes which do not meet their expectations. They, in fact, come very far from receiving No. 1 potatoes, although they may have been taken from a car which, as a whole, passed inspection as of that grade.

Without, therefore, going further into detail, we may say that the jobber, retailer, and consumer have an especially keen and legitimate interest, first in the thoroughness of preceding inspections and second, in the detail with which the results thereof are passed on to them. Without this knowledge, each must make painstaking inspections for his own protection.

#### THE NEED FOR AND FUNCTION OF OFFICIAL INSPECTION

In the preceding paragraphs we have seen repeatedly the need for inspection service which shall be at once thorough, impartial, and uniformly applied. We have seen that the settlement of claims, the adjustment of losses and of contracts of purchase and sale, involving immense amounts of money may be almost wholly dependent upon such service.

It stands to reason that the best inspection services which can be organized by private enterprises may at times be influenced in judgment or action by the manifest interests of those who control them. Effective inspection demands that the inspector possess not only a judicial temperament, but also a degree of detachment and disinterestedness which is not to be expected of any employee or agent of any party directly interested in the product or in any controversy over it.

Perhaps the only exception to this rule is to be found in cases where an association employs inspectors to insure the accurate and impartial enforcement of grading and packing rules as applied to the products of its members shipping under certain brands or trade-marks.

It is possible in some such cases to employ outside inspectors, to protect them from direct contact with the owners of individual lots and thus to secure to the organization the very best inspection service.

The receiver, however, may instantly question the results of any such inspection, however honestly it may have been conceived and executed.

As a means of relieving this situation, official inspection agencies of various kinds have been organized and projected into different parts of the marketing field.

### Mandatory State Inspection

Certain states have passed laws requiring that certain fruits and vegetables be subjected to various kinds of inspection before going to market. The general functions of crop pest or police inspection were referred to in an opening paragraph.

Somewhat similar in general method of application are the mandatory requirements of certain state apple-grading laws. The case of the state of New York furnishes a good example.

No less than 14 states have specific legislation dealing with the grading and marketing of apples so that it is quite impossible to discuss in detail here the inspection personnel and methods by which all of these laws are supposed to be enforced. Suffice it to say that in the case of New York and some others, the provisions are specific, and penalties are provided for growers or shippers who fail to pack and market their goods in conformity with state requirements.

These requirements are not limited to freedom from pests, but include certain specifications which affect commercial value.

### State Inspection Is Usually a Police Measure

The inspection provided for by these laws is really nothing more nor less than the enforcement of a police measure. The inspector, who may appear in any packing shed or any warehouse within the state at any time, is privileged to examine any lot of apples in process of marketing or distribution

and to take legal action against any grower or shipper who has failed to conform to the law. However, this inspector issues no certificate to show the relative value, quality, or condition of different lots which come within the requirements of the state law.

Obviously, therefore, this inspection is subject to the same limitations as is the inspection which may be made for the control of insects and crop pests. The fact that the goods are inspected, proves nothing more than that they meet the minimum requirements of the law under which they are packed.

In the very nature of the case, these requirements must be such that a very large proportion of the crop can be packed thereunder without undue labor and expense. Perhaps it may be fairly said that the principal beneficial effect of such laws and such inspections is to limit somewhat the fraud and misrepresentation which it might otherwise be possible for the grower or shipper to practice. But grades which are written in the statutory laws are seldom detailed and specific enough to meet all the requirements of those who use grades as a basis for commercial transactions.

#### How Inspection Improves the Reputation of a Shipping Section

The purpose of some such laws, as stated by those directly responsible for their enforcement, is simply to improve the general reputation of the products of the state in the markets of the country. An inspection service based upon grades which have been written into law is almost of necessity inelastic and arbitrary.

The law of a certain western state which requires that potatoes shall be sorted and graded to conform to specific standards before they may be loaded for shipment in that state, furnishes an excellent example. The requirement that the entire product

of the state be submitted to official inspection under this law lays upon its Department of Agriculture an obligation which can be fully met only at great expense, and which at best, cannot be carried out within any reasonable limit of expenditure, except by the employment of many local men who will have but few inspections to make and whose adequate supervision it is difficult to maintain.

Although the fees charged for the service make the work as now conducted fully self-sustained, there is no such complete and thorough examination of each car as would be expected of any official agency which was offering a service for the voluntary use of the shipping public. There are several states in which more or less of such mandatory inspection work has been attempted, but the tendency at this moment seems happily to be in the other direction.

#### Voluntary State Inspection Services

Recognizing the fundamental fact that inspection, to be of the greatest commercial value, must be available when and where any interested party has legitimate need for it, several state legislatures have provided, usually through their Departments of Agriculture, for the rendering of inspection service for a fee upon the application of any interested party.

These states generally issue detailed and specific inspection certificates or reports showing all the essential facts which the inspection developed. In many cases, these certificates have the legal standing of prima facie evidence in the courts of the state.

When efficiently administered, these services have been of very great value to growers and shippers. They have made it possible to sell goods by grade or description, f. o. b. shipping point, with assurance to the buyer that the quality of the goods has been passed upon by a disinterested official agency. The

commercial value of these certificates is directly dependent upon the confidence which the purchasers in distant markets have in the competence and good will of the state inspection forces. Unfortunately, the states which have attempted to render such services have not been uniformly successful in establishing this confidence in their inspection.

### OFFICIAL U. S. INSPECTION

Congress finally recognized the unfortunate position in which the shippers of perishable products were placed when the goods which they had sold f. o. b. were rejected by receivers and when goods consigned on commission were alleged to be in bad condition on receipt. Therefore in 1917, Congress in making appropriations for the Department of Agriculture, authorized its secretary to organize a limited service in certain important terminal markets, to inspect and certify on the request of certain interested parties, the quality, grade, or condition of fruits, vegetables, and other perishable farm products.

The specific language of this item has been changed from time to time with the result that during recent years, the Department of Agriculture was not permitted to inspect any shipments which had not moved in interstate commerce.

Until July, 1922, this service was confined to the specific markets which the secretary was required to designate for the purpose, and the movements and usefulness of the inspection force were correspondingly limited. The Department, however, assumed its responsibility seriously and built up a force composed of carefully selected men who, in addition to their basic preparation, were given an intensive course of training in exact and uniform methods of inspection work.

### Fees Charged for Federal Inspection

Congress also provided that the Secretary of Agriculture should charge fees for this service which should be reasonable and approximately equal the cost of the service rendered. These fees, however, could not be re-expended by the Department for the extension of its work, with the result that this service is still inelastic and unable to meet promptly and effectively the varying demands of the industry.

### Federal Inspection Certificate Is Legal Evidence

Congress further provided that the certificates issued following these inspections should be accepted in all courts of the United States as prima facie evidence of the truth of the statements contained therein.

The organization of this service made it possible for shippers, receivers, and common carriers doing business at the designated markets, to secure competent and disinterested inspections which could be accepted with safety as a just basis for the prompt settlement of many controversies out of court.

The mere presence of an official inspector in the market was found to exercise a deterrent influence upon the shipper who did not deliver what he had sold and upon the unjust rejector of purchased goods. The adjustment of railway claims resulting from damage to perishable goods in transit, has been tremendously facilitated to the benefit of all concerned.

Although this federal service has been available on equal terms to all interested parties in recent years, the receivers, being on the ground and able to call the inspector by telephone without the expense of telegraphic communication, have utilized the service more fully than have the shippers in distant producing areas.

This situation has given rise to an increasing demand on the part of the shippers that a similar federal inspection service and certificate be made available to them at the point of shipment. The immense marketing value of a certificate which would be legal proof of the grade, quality, or condition of the product shipped on any given order or contract, can be readily appreciated.

The inability of the Federal Department of Agriculture to make shipping point inspection, stimulated many states in the organization of forces to render such service as lay within their power. The Federal Department cooperated with the states in making their local services as efficient as possible.

#### New Service Under New Authority

In the bill making appropriations for the U. S. Department of Agriculture for the fiscal year beginning July 1, 1922, Congress, in response to the insistent popular demand, modified the language providing for the "Federal Food Products Inspection Service" to read as follows:

"For enabling the Secretary of Agriculture to investigate and certify to shippers and other interested parties the quality and condition of fruits, vegetables, poultry, butter, hay, and other perishable farm products, when offered for interstate shipment or when received at such important central markets as the Secretary of Agriculture may from time to time designate, or at points which may be conveniently reached therefrom, under such rules and regulations as he may prescribe, including payment of such fees as will be reasonable and as nearly as may be to cover the cost for the service rendered: PROVIDED, That certificates issued by the authorized agents of the department shall be received in all courts of the United States as prima facie evidence of the truth of the statements therein contained."

#### Combined Inspection May Be Easier to Get

The effect of this change is to eliminate all limitations as to the places at which federal inspection may be made. It throws open to the federal



officers the entire field of shipping point work. If the language of the act continues as at present and the work is properly financed, it should result eventually in making it possible for any considerable group of growers to secure federal or combined state and federal inspection and certification of the perishable commodities which they must sell to purchasers whom they do not meet face to face.

As this lesson is being written (December, 1922), the machinery for carrying on this work is in actual operation in certain cities and certain states only. Congress, although by this change of language authorizing the Department to multiply its inspection activities 10 times over, did not increase the amount of the appropriation for inspection work. Federal inspections at shipping point must, therefore, at least until July 1, 1923, be conducted upon a very limited scale. In some cases, by cooperation with a well organized state force, a joint state and federal certification is being placed within the reach of a majority of the shippers who desire it. The best served states for 1922-23 are California, Colorado, Idaho, and Washington. Several other states will be equally well served for a part of the year or for certain specific commodities.

An especial effort is being made to make such service available to the largest possible number of potato growers in every part of the country, and arrangements for joint state and federal inspection of potatoes upon a fairly comprehensive scale were made, early in the season, not only in the states listed, but also in Montana, Utah, North Dakota, South Dakota, Wisconsin, Maine, New Jersey, and New York.

Other cooperative arrangements for the inspection of specific products have been made with a number of additional states.

### TRANSITION PERIOD IN FRUIT AND VEGETABLE INSPECTION

Official inspection of fruits and vegetables is in a stage of rapid development, the final form and extent of which cannot at present be definitely foretold.

Although the U. S. Department of Agriculture has entered into some form of cooperative arrangement with 18 states for conducting shipping point inspection work on one or more classes of perishable commodities, there are no two of these agreements which are alike in all respects.

In each case, the form of organization of the work, the division of labor, between the state and federal departments, the size and the disposition of the fees collected, vary to suit the particular requirements of state laws, the limitations under which certain officials must operate, the size of available appropriations for the work, etc.

Manifestly, such a condition cannot continue and it would be a useless waste of time for the student to attempt to familiarize himself with the exact nature and extent of this work as it stands today in the different parts of the country. This Institute, the proper authorities in his own state, and the Bureau of Agricultural Economics, U. S. Department of Agriculture, will be glad to supply him with any specific information which he may need as to exactly what inspection service is available in any specific shipping district or receiving market in which he may be interested.

No statement of this kind can be assumed to hold good indefinitely, since it is obvious that the development of this service must bring about greater uniformity of method in conducting the work and less discrimination between the facilities offered to different producing communities than now exist.

Federal inspectors are located in many large markets. (A new list is published by the United States Department of Agriculture each season.) The inspectors can be reached by a wire addressed "Food Products Inspection," followed by the name of the city and state. They will go at the expense of the applicant to any point within a day's journey.

### Forecast of Future Inspection

One of the limiting features in the development of such shipping point inspection work as the federal government has thus far undertaken, has been the lack of qualified men who could be put into the service and who could be given important responsibility in this field of work on short notice.

The writer is immediately responsible to the Chief of the Bureau of Agricultural Economics for the administration of all of its activities in the inspection of fruits and vegetables. He has made an intimate study of the inspection services of different states before the federal government entered the field. He is held personally responsible for the efficiency and care with which the shipping point inspection work is being organized and conducted.

He has been more than 27 years in the public service, intimately connected throughout that period with many of its agricultural activities. He believes that nothing has been undertaken in the agricultural field since the institution of the county agent system, which will result in giving employment to so many qualified men as will the general introduction and use of the federal shipping point inspection service, whether conducted by the Department without state aid or whether carried on in cooperation with state forces.

With the possible exception of the nation-wide market news service on fruits and vegetables which the United States Department of Agriculture is now

conducting, he believes that there has been no single development affecting the marketing of these products which means so much to the growers as will the development and use of this service.

### CONCLUSION

While inspection is an invaluable aid to the proper merchandising of perishables under certain conditions, a commercial inspection may not be worth its cost in a very large number of cases. When contracts call for the delivery of products of certain qualities or grades and when buyer and seller can each trust the other to act in complete good faith, it is only necessary that the goods delivered actually conform to the specifications provided. Both parties have the same conception of what these grades and qualities really are.

It is contrary to sound public policy to impose any unnecessary burden or expense upon such legitimate and essential business. For this reason, it is to be hoped that all state laws which provide for compulsory commercial inspection may in the near future be repealed, as fast as official voluntary state and federal inspection services can be organized to take their places.

An inspection to determine grade and quality is a commercial service of great value under many conditions. It must eventually be available at shipping or receiving point or both, to a large majority of those in the industry if needless loss and controversy are to be avoided. But in the writer's judgment this furnishes no excuse for the substitution of the strong arm of government which enforces an act which says "Thou shalt," for the welcome aid of the disinterested official friend who, upon request, obtains the facts concerning the specific shipment and makes an authoritative report thereon for the benefit of an interested party who is willing to pay for its cost.

To facilitate business by offering disinterested service at cost, is now recognized as a legitimate field of governmental activity but it has been so recognized only within recent years. The more clearly we can introduce this idea throughout the entire field of fruit and vegetable inspection, the more efficiently will governmental agencies serve this industry.

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#### ONE OF THE INDUSTRY'S BEST ALLIES

Without facilities for refrigeration and storage, the fruit and vegetable industry long ago would have outgrown the market. Consider the Pacific Coast as an illustration. California, the country's largest producer of both fruits and vegetables could not produce so much with profit if it were not possible to ship these products entirely across the country.

Washington, the leading apple producing state, would have been equally handicapped without means of refrigeration and storage.

Refrigeration is such a big subject that it is necessary to go into it thoroughly, and so, the next three lessons will be devoted exclusively to storage and refrigeration.

Much of the information that is contained in the following lessons has never been put into type before. It has been locked in the brains of those few men who were directly engaged in the storage business. It is universally recognized, however, that everyone interested in any phase of the marketing of fruits and vegetables must have a clear understanding of storage and refrigeration.

## GLOSSARY OF MARKETING TERMS USED IN THIS LESSON

blemished stock. Fruits or vegetables that are defective or that have been injured, or their quality reduced in some way.

certified seed. Seed, the pureness of which is certified to by an official inspector. Pureness is usually considered to include trueness to variety, freedom from foreign materials and from disease and insect pests. Not all states have arrangements for certifying to the quality of seed, but the movement is spreading. In some states, for example, alfalfa seed is certified and the bags containing it closed with an official seal so that the purchaser can be sure that the seed he is purchasing is certified. In some other cases, potatoes are treated in a somewhat similar manner.

clean stock. The opposite to blemished stock. Fruits and vegetables that are free from injuries and imperfections, and especially that are free from disease and insect pests.

f. o. b. Free on board. This is used in connection with purchases to indicate that the purchaser pays the freight but the seller loads the goods.

growth cracks. Cracks in individual fruits or vegetables that have been caused by a too rapid growth. Such cracks are common, especially in vegetables; for example: potatoes, carrots, etc., crack open if their development is too rapid.

inspection, n. An examination of a product to determine whether it conforms to certain specifications, especially to certain grade descriptions. An inspection usually includes an examination to determine one or more of the following factors of quality and condition: size, color, shape, freedom from blemishes and decay, degree of ripeness, etc.

mandatory, adj. Obligatory; a condition that cannot be escaped; a positive command required by law.

prima facie, adj. Established by the available evidence; recognized as correct unless successfully contradicted. For example: when any evidence is presented in a court and the one accused does not present other evidence that refutes the first evidence presented, the accusation is considered by the court to be correct and the one accused loses

the case. It is because of this situation that the word "prima facie" is used; it designates evidence that has not been successfully refuted.

rebate, n. A discount; a deduction made because of some lack in quality or condition or because of a failure on the part of the seller to conform with certain conditions.

scab, n. A plant disease that results in a roughened, pitted, or warty exterior of the fruit, or edible portion. The scab does not necessarily cover the entire fruit or vegetable.

the "street," A term used to refer to the fruit and vegetable wholesale market. The wholesale dealers are usually located principally along one street, thus the term.

up to grade, Conforming to specified standards.









# Storage of Fruits and Vegetables

BY EDWIN SMITH



MARKETING FRUITS AND VEGETABLES  
LESSON 4

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Issued for Members

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**The American Institute of Agriculture**  
CHICAGO



## THE MAN WHO CONDUCTS THIS LESSON



EDWIN SMITH

His whole business career has been devoted to the storing and transportation of farm products, and so Edwin Smith was particularly fitted to write this lesson on storage, and another on transportation.

Mr. Smith graduated from the Michigan Agricultural College in 1912, and until 1917, worked for the Canadian and British Columbia Departments of Agriculture as Investigator of fruit transportation and storage.

Our own Federal Department of Agriculture secured his services then as specialist in fruit and vegetable transportation and storage.

At the present time he is Secretary of the Fruit Export Corporation, of Seattle, Washington. He is in charge of the Northern Washington Division of this concern at Wenatchee, Washington, and he is also Western Representative of the United States Cold Storage Company, and the Kansas City Storage and Warehouse Company.

In the course of his official work, he has prepared several publications, embodying his investiga-

tions and experience in the storage and transportation of fruits and vegetables. Some of the most important of these publications are:

"Farm Storage for Fruits and Vegetables," a bulletin issued by British Columbia.

"Pre-cooling, Shipment and Cold Storage of Tender Fruits," published by the Canadian Government.

"Railroad Organization for Perishable Freight Service."

Mr. Smith is extremely practical in his instruction and every point is made most interesting and clear.

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### HOW TO STUDY THIS LESSON

This lesson is designed to be helpful for the man who owns, or wishes to own his own storage house, and for the one who must rent his storage space, and for the man who serves as a workman in a storage house.

Even the man who owns some storage space of his own is likely, at times, to have need of renting space in other localities, and so it will perhaps be best to study the lesson first with the viewpoint of an owner of fruits and vegetables who must hire storage space for it.

You have already learned the fundamental principles of cold storage, and so you are prepared to understand the practical side of storage as presented in this lesson. Study, therefore, to get the specific instruction that is here, which will help you to decide when to store, where to store, and how to store.

The lesson goes into detail on certain fruits and certain vegetables, but you will recognize, of course, that there are other fruits and vegetables that you may want to store some time. You will find that information is also supplied for these, but not in such great detail.

#### How to Determine Market Trends

You must realize, of course, that this lesson alone cannot hope to give you all that you need to

know about how to determine the trend of the market, and how to determine possible variations in supplies and demands. This knowledge you will develop as you proceed with other lessons, and when you finally reach those lessons which treat these subjects specifically, you will be prepared to comprehend this, the most valuable of marketing knowledge.

### **Storage Helps Make a Year Round Business**

The author well emphasizes the fact that storage should not be used with the idea of speculation, but rather for the purpose of making a year round business out of a short season business. Goods are preserved in storage so that the merchant can supply his trade whenever his customers wish to buy.

### **How to Avoid Storage Losses**

One of the most important things to learn about storage is: how to prevent losses in storage. This subject is treated in detail for different products but, unfortunately, remedies and preventatives cannot be stated for all cases, due to the fact, that some varieties of fruits in some localities deteriorate from different causes, and in different degrees, than the same varieties produced and stored in other localities.

In other words, it is important that you talk with those who have had experience in storing fruits and vegetables in your locality. They can tell you what troubles they have had and how they have overcome them.

As a matter of fact, to be successful in marketing, it is important to develop this habit of talking with others who are engaged in the same phase of marketing. We all learn from each other's experience every day, that is, if we talk over our experience with each other. This course contains the experience of hundreds of men in the business, but these same men are having new experiences every day, and one result of your studying should be, to develop the habit and the ability to keep in touch constantly with developments in marketing work.

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# STORAGE OF FRUITS AND VEGETABLES

BY EDWIN SMITH

Temperature is the king of preservation when prolonging the life and conserving the quality of fruits and vegetables after harvesting.

While it is important to have humidity and air conditions favorable to the requirements of the product, it is temperature that governs the speed of ripening and forestalls decays.

Ripening is a process of oxidization of cell constituents. Starches change to sugar and sugars are reduced to a form that means that the life of the product is nearly spent and that its vitality is all but gone.

A low temperature slows up these oxidizing processes. It slows up ripening and thus lengthens the life of the product. Temperature must be foremost in your mind in all of your storage operations if you are to attain a full measure of success in holding fruits and vegetables for late markets.

Whether you build or lease your storage, it will largely fall upon you to decide how to build or what kind of a storage to lease to give best results.

## PART I

### THE SELECTION OF A COLD STORAGE PLANT

The fruit and vegetable marketing fraternity is called upon to provide much of its own cold storage space; more especially is this true at the shipping end of the business. Therefore, it is very much concerned about the building or buying of suitable storage plants.

In determining the character of the plant that you may be required to build or buy, you will be guided by the fundamentals given in Lesson E. You will also carefully follow the recommendation to consult reliable refrigeration architects and engineers, and successful storage operators handling your commodities. You should also turn to the United States Department of Agriculture for such suggestions and advice as their specialists stand ready to give.

### CONSTRUCTION FEATURES OF THREE TYPES OF STORAGE

This lesson aims to direct you with building suggestions to enable you to check up on your architect, contractor, foreman, or "hired help."

#### How to Build a Cellar for Fruits or Vegetables

Have adequate drainage.

Have an end entrance facing away from prevailing winds in cold countries, but toward prevailing winds in more temperate regions, with doors that give protection and that can be readily opened for ventilation.

Have outlet flues through the roof that can be opened or closed and whose total cross section area is not less than 1% of the floor area of the cellar. Have these vents provided with valves that will enable you to close them during the warm day and open them during the cool nights.

Have adequate strength in retaining walls. Use masonry of permanent construction.

Rather than use a soil roof, use a waterproof roofing material and 10 inches of dry mill shavings between the rafters.

Raise produce off the ground by strips of flooring, the joists of which should run away from

the doors or toward the intake ventilators for the purpose of giving adequate ventilation.

Provide bins of 8 or 10 feet with air spaces between so constructed that produce stored in bulk will not be over five feet deep.

### How to Build a Common Storage

Better results will be had in a storage built above ground than in a basement.

Apply to the United States Department of Agriculture for publications and advice.

Insulate walls and ceiling against heat. If you insulate adequately to keep out the heat of fall and spring, the insulation will be more than sufficient to make the building frost proof. Do not use less than the equivalent of four inches of cork for insulation. If you use dry mill shavings, you will need at least six or seven inches. Ten to 12 inches of dry mill shavings make an excellent insulation.

See that mill shavings are sealed against moisture both inside and outside by the use of waterproof paper, asphalt, or other adequate water proofing.

Brick, hollow tile, concrete, or other masonry do not provide adequate insulation to keep out heat, even though they may be "frost proof." If using brick, tile, or other masonry, even in the basement, insulate the walls.

### How to Ventilate

Ventilate each room or floor separately. Use a few, big outlet flues rather than many small ones, drawing warm air from the center of the room near the ceiling. The total cross section area of the outlet flues should be between 1% and 2% of the floor area.

Intake ventilators should be distributed about the walls of the storage so that cold air will be drawn through all parts of the produce. Their total area of opening should be 25% greater than the outlet openings. They should lead to the storage in such a manner that cold air may be distributed beneath a slatted flooring.

Where possible, use patent or mill-made refrigerator doors. Have no windows in a storage house; use artificial lighting.

The cost of a common storage warehouse will be so variable in the different states where labor and materials have their costs extending over such a wide range that no concrete idea can be given here, but the builder should determine the size of his building and secure estimates from a reputable contractor.

### How to Build a Cold Storage

In building a cold storage, it is first necessary to determine the size. After computing the cubical contents of the number of packages or of the tonnage that you will desire to place in storage, increase this space 75% to 100% to take care of aisles, spacing and other waste space that is necessary to warehouse your produce adequately.

From 2½ to 3 cubic feet are allowed for each box of apples and about 8 cubic feet for a barrel. When you are sure about the size of your plant and about the work you desire to perform, consult a refrigeration engineer and architect.

Insulation is a good investment. Not less than the equivalent of four inches of cork should be considered. If a basement is refrigerated, the floor should have a better insulation than cinders. Use cork.

Direct expansion or brine circulation is more economical than an indirect air circulating system. However, air circulation is needed for air conditioning. A direct pipe system for the main load of refrigeration coupled with an auxiliary air circulating system makes a satisfactory solution of this problem when fruits and vegetables are to be stored.

Protect goods by adequate drip pans beneath pipes, unless concrete floors are used, when pipes should be located over aisles.

### Use the Best Machinery

Do not experiment with new or cheap machinery. After a competent engineer has figured out your machinery requirements, then invest in reliability. Make sure that you have a competent engineer figure on your machine requirements, because one who has not had experience in refrigeration work may make many errors in determining your refrigerating requirements, both in taking the heat out of the produce and in handling the heat that passes through the insulation in the different climates of our various states.

Use as few doors as possible. What doors you do have should be made by a competent refrigerator door manufacturer. Patent refrigerator doors of known value are a good investment. Doors leading to the receiving and shipping platforms should open on air locks or corridors in order to save refrigeration that might be lost through open doors.

So arrange your elevators, conveyors, elevating machinery, and spiral chutes that efficiency may be had in every part of the building.

Where a single commodity is stored, handling machinery may often be used to effect great economies in warehousing. If you are handling a various

assortment of commodities, caution should be had in making heavy investments in handling machinery that may not be applicable to all of your goods.

### How To Get Even Refrigeration

Special caution should be given to the manner in which your refrigeration engineer distributes his refrigeration within the storage rooms. Plants having direct piping should have the pipes so spaced that not more than 12 to 14 feet will extend between the piping and the most distant part to which the refrigeration will have to be carried. If this is not done, you are running a risk of freezing the produce next to the pipes, while, the more distant produce will not receive enough refrigeration.

For the same reason, rooms having an air circulating system should have the air so distributed that the cold air will be released evenly throughout the room. The manner in which the air is conveyed is of less import than that it be released evenly. It is also important to have the air leaving the room from different points so as to assist in the equal distribution of refrigeration. If the air is exhausted at one point, there is a tendency to have a warm pocket in this region.

Where general warehousing and shipping are to be done along with cold storage practice, it is quite important to have ample platforms, both for receiving and shipping. A platform not less than 14 feet wide can be used to advantage, for receiving. Covered platforms are a very economical means of warehousing and shipping where assembling is to be done for immediate shipments.

### SHALL YOU OWN OR LEASE STORAGE SPACE?

If your business is permanent, you can well afford to buy or build and operate your own storages:

1. If your resources will allow you to own a storage that will adequately protect your produce

2. If you can make a profit thereby

3. If you cannot make a profit operating a storage each year, but can save enough from over-ripening or freezing losses during exceptional years to offset seasonal operating deficits

4. When competition makes it difficult to lease storage space

It is often the case that a widespread distribution requires storage at the shipping point. This may demand building. However, before buying or building make sure that your industry is stable and that you can sell your storage house, should your business have an unexpectedly early termination.

#### **When It Is Advisable to Lease Storage**

Unless your resources are such as will enable you to build or buy storages that are adequate to keep your product in the best possible condition, you will be money ahead to rent good storage, even though the rates may be considerably greater than the total of interests, taxes, insurance, labor, and other expenses on a storage of your own.

You may be facing requirements that will force you to use storage away from your shipping points thereby demanding, in most cases, the leasing of storage space. Cold winters in your locality may force you to ship before cold weather and so you must lease space nearer to the consuming centers so that the produce may be marketed during the winter, regardless of weather conditions.

Your markets may be such that quick delivery is required, in which case you must have space near those markets.

The length of your storage season may be so short that it makes it cheaper to rent space.

The financing of your operations may require that your products are so stored that you may have a ware-

house receipt to use as collateral for the borrowing of money, which, of course, you could not have if your goods were stored in your own warehouse.

### Where to Lease Storage Space

Your leased storage space will probably be either at your shipping point or at a gateway to your markets, or at both of these points. Terminal storage is not used to any great extent by fruit and vegetable shippers except in those instances where they are certain of sales at terminals and where storage charges at those terminals are such as to make a direct saving.

With many products, your storage operations will be centered at your shipping point, whereas with others, such as apples and pears from Pacific Coast districts, you will split your storage between your shipping point and such intermediate points as Denver, Minneapolis, Kansas City, Omaha, St. Louis, and Chicago.

It is advisable to store at points from which you can have as wide a field for distribution as possible:

1. Have a part of your stock stored close to your prospective markets for quick delivery during periods of fluctuating prices. You can then take advantage of temporary advances in prices.

2. Have enough of your products stored near consumers so that safe delivery may be made during extremely cold winter periods.

3. Have enough storage at the shipping point so that, in cases of car shortage, you can store your product immediately after harvesting without long delays. This will apply particularly to those varieties of fruits and vegetables that are to be held for late delivery.



**How to Select the Right Storehouse**

There are certain cardinal points to be looked into in the selection of the storage that you lease. First of all, the plant should bear a good reputation.

**Transportation Facilities**—It should be so situated that you can ship to your prospective markets at low through rates. The railroad connections should be such that delay will not be encountered in getting refrigerator cars or in receiving or delivering your carload shipments from or to the trunk line railroads over which you ship.

**Construction and Equipment**—The cold storage should be modern, with equipment that will maintain uniform temperatures throughout all parts of the rooms at the point desired for your produce. By all means, satisfy yourself on this point of maintenance of temperatures, and that air conditions will be satisfactory at all times.

**Sorting and Stacking**—Satisfy yourself that your produce will be sorted, spaced, stacked and handled so that it will insure its best keeping. Have someone examine the plants during the period of storage and report on the character of the care that your produce is getting, as well as on temperature and air conditions.

**Inspection**—When your goods are being put into storage, it is important for the plant to have a competent inspector who is familiar with your type of produce so that you may be assured that it is in a good state for storage when received and that you may be advised from time to time during the storage period as to the condition of your goods.

**Financing Facilities**—The storage company commonly arranges to borrow money on goods stored for the owner. Not only is it important for the storage company to negotiate a loan to pay the freight on goods received, but it is also often necessary to

secure a further loan for the owner, using the goods as security. Your storage company should be in a position to assist you in this respect. It is important, therefore, to ascertain the rate of interest charged before engaging space.

Insurance Rate—Some storages are of fireproof construction while others are not. Insurance costs are high in those not fireproof. Good fireproof construction should not take higher rates than 15 or 20 cents per \$100 value per year. Ascertain what your insurance rates are to be before storage.

Clerical Service—Your storage should be in a position to render you the clerical service on all phases of accounting that will satisfy your particular needs.

Traffic Service—A storage company should provide a traffic service that will give you adequate assistance in handling all claims on transit losses and damages and that will insure you against all traffic errors and oversights.

Storage Rates—After thoroughly investigating all of the other phases of your prospective storage company, see that the rates are such that will allow you to use the facilities. It is wise not to let the storage rates be the deciding factor in every instance, since storages giving a high class service cannot operate as cheaply as those giving a mediocre service and the loss that you may sustain in the cheap storage might easily cost you many times the additional amount that you will pay for first class facilities.

#### WHEN TO STORE

You will always be confronted with the problem of deciding when to store and when not to store. If you are to be a real factor in produce marketing, you must eventually arrive at the conclusion that you

will have to supply your trade at the exact time that the produce is wanted.

This means selling during the entire marketing period and governing your storage holdings accordingly. Seasonal advantages may be had by the intelligent storing or selling of a product that has speculative possibilities. But the best policy is to regulate your sales and percentage of stocks for storage to meet the seasonal consumption of the product.

Naturally, you must keep out of glutted markets and must take advantage of short crops. Study the statistics of the United States Bureau of Agricultural Economics and of your national trade associations. When crops are short (nationally) and early values seem low, late holding (crops stored for later sale) may be increased to advantage.

### How Long to Store

The volume of the national crop in storage should be considered in deciding on the length of time to hold. When there is a large national crop, low values, great waste, heavy consumption, and a general lack of interest in the crop, speculative possibilities are often very good and great advantage may be had by making use of storage.

The length of time that you hold your stocks in cold storage should be governed by the rate of decrease in the national holdings. A slow decrease should cause you to release storage stocks faster, while a rapid decrease of the national holdings should indicate higher future values, providing such holdings are not abnormally higher than a five-year average.

### Don't Hold Over One Season

Store only good grades of fruits and vegetables. Take no chances from deterioration of inferior grades or unpopular varieties, and do not store out of

season. Holding an old crop over into the period of a new crop or into the season of other fresh fruits and vegetables, will prove disastrous.

Too many accept cold storage as a preservative and having held produce a long time after harvesting, move it into cold storage to stop further deterioration. The delay in moving it into a low temperature has caused a damage that cannot be remedied, and cold storage is powerless to prevent losses in such cases.

The consumer is the final judge of your storage operations; the produce may be in good condition when removed from storage, but if it is not in prime condition when it reaches the consumer, someone loses, and eventually the loss falls on the producer. In operating your own storage or in placing your produce in public cold storage, always consider in what condition your produce is going to be when it reaches the consumer.

### HOW TO STORE IN TRANSIT

In seasons when storage is scarce and production is heavy, or when you are situated at a point where storage is scarce, it is advisable to make arrangements for your storage space prior to the season of shipment. In making reservation, have it thoroughly specified as to the storage rates, the insurance and interest rates, and the approximate season of storage.

### Storage-In-Transit Privileges

Various railroads have granted storage-in-transit privileges whereby the shipper may have his cars unloaded at intermediate or gateway points, the goods placed in storage for a period less than a year and again withdrawn and shipped to destination paying the through rate from the originating point to final destination. Such privileges carry a charge

to cover switching and accounting. This fee on apples is at present 6 1/2 cents per 100 pounds, in most territories.

Where goods are stored in transit, the freight to the storage must be paid to the railroad at the time the goods are unloaded. When they are shipped out, the bill of lading carries the notation covering the incoming car number and initials; the road from which it was received; and the statement that it was stored in transit.

When shipping out, the storage company, which has paid the initial freight, draws a sight draft against the outgoing railroad for the amount of the freight paid when the goods were received. The railroad company then carries this amount on the waybill together with the storage-in-transit charges, all of which appears on the final freight bill.

This storage-in-transit privilege is not universal on all railroads and its application should be investigated before storage. Ascertain, therefore, the routes leaving the storage over which through rates apply when stored in transit, as well as those over which the shipment is made to storage.

#### Send Bill of Lading to Storage Company

The bill of lading should be sent to the storage company unless a railroad delivery order is used, along with advice as to the details of shipment including:

1. Your register number (explained later)
2. What you desire in the way of insurance and loan
3. Nature of sorting desired, if any
4. Temperatures desired
5. Information as to whether the lot is being stored in transit

### Billing to Storage

Ship your carloads with bill of lading showing consignment to yourself or agent in care of the storage company, with the notation "For storage in transit" on the face of the bill of lading. Make inquiry from your storage as to the best railroad accommodations to the storage and route your shipment accordingly.

### Inspection

Request your storage company to inspect the goods when received so that if they are not in condition for storage, you may dispose of them otherwise. Advise your storage company what disposition to make of broken packages, or parts of the consignment that may be damaged by freezing or other injury and not fit for holding for later markets.

If inspections are desired during the period of storage, make application for such, otherwise the storage company might neglect to advise you of the condition of your goods.

### Storage Lot Number

Many shippers have a register number of each carload shipment to make it easy to keep track of each individual lot. If you use this system, advise the storage company of your register number for each carload shipment and request them to use it when referring to any carload shipment of yours in their hands. The storage company also gives a number to each lot, so when you refer to a given carload shipment, use the cold storage's lot number. This will be convenient for both parties.

### Executing a Loan

It is often necessary to execute a loan to cover the freight charges, and it is sometimes desirable to secure a loan on the goods in storage. In some

cities, with certain products, it is necessary to use collateral other than the warehouse receipt. In this case, it may be necessary for the shipper to give his note to the storage company for the amount of the loan, whereupon the storage company will use the note as collateral security for its financing operations.

Financing arrangements should be made with the storage company before shipment so that no delay will result when you make application for your loan. The amounts loaned on fruits and vegetables in storage are variable, being gauged by the rating of the owner, amounts in storage and storage quality of goods. On standard goods, from 35% to 75% of the F.O.B. value can be secured.

### Selling Out of Storage

When selling out of storage, it will be necessary to give your storage company an order for withdrawal of goods. If you are to break up your carlots and desire certain sizes or varieties withdrawn at different times, this should be taken into account at the time of storing goods so that the storage company can sort and pile according to size, variety, and grade. In some storages this will mean an additional cost.

Advise your storage company as to whom you are shipping the goods, the routing of the car and the kind of railroad protective service desired. Advise whether you wish to pay the storage charges at the time of shipment or whether you wish them collected from the consignee.

### Settling Storage Charges

The most convenient way of settling charges from the standpoint of the storage company is to have payment covering incoming freight, insurance, loan, and storage charges at the time of withdrawal.

This is not often convenient for the shipper. In that instance, he should arrange with the storage company so that it will forward the incoming freight and storage-in-transit charges with the waybill, in which case railroad charges will be collected from the consignee.

If you have arranged for the buyer to pay the storage charges, the storage company should be so advised, and it will draw a draft upon the buyer for the amount due. In this case, the buyer must have a financial rating that will insure the storage company against possible loss.

## PART II

### SPECIAL STORAGE REQUIREMENTS

#### Special Storage Suggestions for Apples

In storing apples, either in common or cold storage, only the two higher grades should be considered for storage for any length of time. Apples having skin punctures are subject to blue mold decay even at cold storage temperatures, and, therefore, apples require careful handling and packing.

This fruit is very responsive to quick storage after harvesting. The delay of several days in a warm temperature often shortens the storage season several weeks or months.

It is not desirable to store any but standard varieties. It is not usually good practice to store summer and fall varieties to compete with the later varieties.

Buyers recognize a certain variety to be prime in its season and pay less for it out of season. This does not mean that cold storage should not be used with summer or fall varieties. In fact, it often



proves very profitable in preventing these varieties from moving to glutted markets.

It has been found that picking apples in an immature state has resulted in an increased development of scald after the apples are placed in storage. It is essential that apples be mature at picking time, although a distinction must be drawn between maturity and ripeness. Many of our commercial varieties should not be ripe at picking time.

### Immediate Packing Best for Storage

As a general practice, apples should be packed immediately after picking. Varieties susceptible to scald may be benefited by being held loose in a cold, well ventilated place, for a couple of weeks.

Storing loose apples and packing out during the winter or spring months is a dangerous practice, particularly if the apples are to be shipped over a long distance. Apples packed late, lack vitality and are subject to being injured much more easily than they are when freshly picked. The result is that decay develops much more rapidly in the late packed lots than those that are packed and stored at harvest time.

### Proper Temperature for Apple Storage

Apples should be stored at a temperature of 30 degrees. It has been found that the Yellow Newtown as grown in some parts of the United States develops a browning about the core more extensively in a temperature of 30 degrees than it does at a temperature of 34 to 35 degrees. With this exception, 30 degrees should be used. The freezing point of apples is about 28 degrees.

The relative humidity for the best storage of apples is 85%.

### Damage That May Occur in Storage

**Scald**—Scald is a disturbance occurring on the skin of the apple resulting in a discoloration and commercial loss of the fruit. It is caused by the gases given off from the apple being unable to escape freely.

A change of air over the fruit whereby the gasses given off from them are removed, prevents the occurrence of scald. It is not commercially practicable, however, to remove these gasses by ventilation.

Oiled wraps or oil on the surface of or in the vicinity of each fruit will control scald. Where oil wraps are used, the oil should be an odorless mineral oil and the wraps should contain an oil content of at least 15%.

**Decays**—The principal decays in storage are forms of blue mold and gain access to the flesh of the fruit through mechanical injuries. The greatest preventative of decay is careful handling. Certain decays also follow scald and apple scab. Others are due to a breaking down of the flesh following over-ripeness.

**Bitter Pit-Jonathan Spot**—There are certain disturbances known as "Bitter Pit," "Baldwin Spot" and "Jonathan Spot" that occur on certain varieties ruining their commercial value when in storage, over which no control is known. The peculiarities of each variety in the district grown must be known and consideration should be given to these at the time of storage. Low temperatures are very essential in postponing these disturbances.

**Internal Breakdown**—A browning of the flesh toward the core of the fruit is the cause of vast losses in commercial storage. This results from a number of causes, principal of which is over-ripening caused by delay in picking or delay in storing. Some evidence has been gathered which indicates that some forms of internal breakdown follow the disappearance of water-core.

Water-Core—Certain varieties of apples such as Wagener and Winesap grown in some districts, develop water-core, a deposit of water in the inter-cellular spaces in the flesh of the fruit. Apples badly water-cored should not be placed in storage.

It has been found, however, that where water-core is not extremely bad, it disappears during storage and the apples may be used for commercial disposal. This disappearance is occasioned by the absorption of the water deposits. Where this disturbance is so extreme as to break down the cell walls, the fruit is rendered worthless.

### How to Stack in Storage

Barrelled apples are stored in tiers on their sides. The nature of the barrel is such that no special precautions need to be taken for spacing or air circulation. Boxed apples should be stacked on their sides on two-inch strips, using lath between each layer of boxes.

Warehousing should be such that refrigeration can be distributed to all parts of the pile of fruit. This is usually best accomplished by leaving spaces between the ends of the boxes. The bulges provide the spacing in the rows.

### The Apple Storage Season

Some of the principal commercial apple varieties of the United States are given in Table I with their cold storage seasons. In some instances, the storage season given does not indicate the length of time that the variety may be held without decay or ripening, but rather the period at which it is usually advisable to complete storage withdrawals on account of its marketing season or its susceptibility to scald.

Varieties indicated as being susceptible to scald should be wrapped in oil paper.

Table I. STORAGE PERIODS FOR APPLES

Variety	:Month of Removal: : from Storage :	Troubles to be Avoided
Duchess	: September :	
Gravenstein	: September :	
Wealthy	: October :	
McIntosh Red	:January-February:	
Jonathan	:January-February:	Internal Breakdown-
	: :	Jonathan spot.
York Imperial	:January-February:	Scald
Wagener	:December-January:	Scald
Delicious	: April :	
Greening	:February-March :	Scald
Rome Beauty	:February-March :	Scald
Stayman	:February-March :	Scald
Northern Spy	:February-March :	
Spitzenberg	:February-March :	
Baldwin	:April-May :	
Winesap	: July :	
Ben Davis	: July :	
Yellow Newtown	:April-May :	Scald

### Association Storage Reports

The International Apple Shippers' Association has about 1,000 apple shippers and dealers as members. Headquarters are at 522 Mercantile Building, Rochester, New York. During the winter months, it publishes monthly apple storage reports for the United States and Canada, showing the amount in common and cold storage, the decrease from month to month and a comparison with similar quantities of the preceding year. This information is distributed to members only and is almost indispensable to the intelligent marketing of cold storage apples.

The same association publishes very accurate apple crop estimates which are helpful in gauging storage operations.

### SPECIAL SUGGESTIONS FOR STORING GRAPES

While grapes may be stored for short periods in the various types of baskets used for their marketing, very little cold storage of grapes is done when the drum or barrel is not used. This package is commonly used with the European type of grape only.

#### Packing for Storage

Only good clusters of standard varieties of grapes should be selected for drum packing and these should be packed with a sawdust or cork filler. Kiln dried redwood or spruce sawdust has been found to be best. This should be passed over a sieve in order to remove all fine particles of dirt and sawdust.

A layer of sawdust is placed in the bottom of the drum, after which a layer of grapes is placed, then sawdust is filled in alternately until the desired weight (32 pounds) of fruit is included. The package must be shaken during packing in order to have the sawdust thoroughly incorporated with the clusters.

#### Temperature for Grapes

Grapes respond to pre-cooling and should be held at a temperature of 30 degrees. Humidity is not important except where paper drums are used, in which case it is important not to have too much moisture in the air.

#### Storage Losses

The two principal losses in storing grapes are those caused by the berries loosening from the stems, and decay following rough handling and injuries.

#### Period of Storage

Since the storage period of grapes does not usually extend over more than three or four months, close watch is usually given the fruit from the time

it is placed in storage. The tendency of the berries to loosen from the clusters indicates that the fruit should be placed upon the market at once.

#### FEW LEMONS ARE PLACED UNDER REFRIGERATION

Cold storage is not usually used for this fruit. When used, the temperature is not held lower than 38 degrees. In common storage, the lemon requires a relative humidity of about 75%.

The keeping quality of a lemon is largely dependent upon the district in which it is grown and the manner in which it is harvested, cured, and shipped. The principal storage of lemons takes place in the packing houses where the late winter and spring pickings are held for early summer demands.

Since the principal loss is that resulting from blue mold decay, which is caused by skin injuries, it follows that extreme care must be used in handling lemons for storage. On this account, it has been found dangerous to use machine graders and sizers. Lemons are best sorted by gloved hands into trays from which they are packed into boxes.

#### ORANGES ARE OFTEN PRE-COOLED

Oranges are ordinarily stored on the trees, although refrigeration is used very extensively in the California orange industry for pre-cooling shipments.

A number of years ago, extensive pre-cooling plants were built by the railroads for pre-cooling carloads of oranges after loading. These plants are being used less and less each year, whereas great advances are being made in the building of private pre-cooling plants.

The oranges are placed in the pre-cooling rooms directly after packing. Cooling usually takes place over 36 or 48 hours, after which the fruit is loaded into refrigerator cars.

For all but the warmest part of the shipping season, these pre-cooling plants provide the only ice that is furnished the cars for the entire journey.

#### Temperature for Orange Storage

Oranges may be stored at 34 degrees. In some instances, better results are had at 32, while in others, it has been found that oranges develop a browning on the surface of the skin that lowers their commercial value. Ordinarily, oranges are not held long but go to dealers very soon after harvesting.

#### PEACHES NOT EASILY STORED

The peach is a fruit that is not adapted to refrigeration, although refrigeration is indispensable in its successful harvesting and marketing. Refrigeration applied to the peach seriously lowers its quality. When held long under refrigeration, the peach may retain a good appearance, while developing very unwholesome and unsatisfactory quality. The peach must not be ripe when placed under refrigeration unless for a very short storage. It should be picked when mature but still firm. If left on the tree until ripe and then placed under refrigeration, results are almost sure to be very disappointing. The fruit becomes mealy, turns brown and soon becomes unedible.

#### Temperature of Peach Storage

Peaches should be stored at 30 to 32 degrees. Higher temperatures may be used for short periods. So far as quality is concerned, better results will be had by storing for a short period, although it cannot be said that the extremely low temperatures are responsible for loss of quality.

#### Period of Storage

Certain varieties of peaches such as the Elberta, may be stored in a condition that renders their marketing possible over a period of from two to eight

weeks. The longer period of storage requires that the peaches be placed in storage immediately after picking; that they are not ripe at the time of picking; that they are placed in a small container, the box being preferable, and that the temperature be maintained at not more than 32 degrees. Storage peaches are not suitable for long distance shipment.

### Pre-Cooling

The peach is very responsive to pre-cooling, and this practice has worked to a great advantage in its marketing over long distances. Not only is it enabling peach growers to allow this delicious fruit to become more mature before picking, but it is also acting as a deterrent to brown rot, the principal source of loss in peach shipping. Instructions given on pear pre-cooling apply to this fruit.

### Brown Rot, the Greatest Source of Loss

One of the greatest losses in marketing fruits and vegetables is that occasioned by the prevalence of brown rot in fruit shipped from Atlantic Coast districts. While the sanitary conditions in the orchards, as well as the spraying of the fruit, are important factors in the control of the disease, it also has been found that the rot develops very slowly when the fruit is held at a temperature below 50 degrees. By pre-cooling the fruit to a temperature of 38 to 40 degrees and shipping in iced cars, much of this loss may be prevented.

### PEARS GIVE GOOD RESULTS UNDER REFRIGERATION

The pear is one of the most satisfactory fruits that we have to deal with in the application of refrigeration. Certain varieties of pears being highly perishable, require pre-cooling and the best of refrigeration to prevent over-ripeness in long distance shipping.



The pear should not be harvested in an immature condition. Immaturity is responsible for withering and for a great loss of quality on account of cutting off the development of sugar. When the pear is allowed to remain on the tree until mature, it has been found that its keeping qualities are improved.

This does not mean that the pear should be allowed to ripen on the trees. In all cases it must be picked before coloring changes. It must be handled quickly from the tree to refrigeration, should be carefully packed in small containers, the box being the most satisfactory, and should be held at low temperatures.

### Temperatures for Pears

Immediately after picking, pears should be subjected to pre-cooling to 28 degrees. They respond very favorably to this rapid chilling as it has been found that the ripening progresses more slowly during the storage period when they are given this character of cooling.

If they are cooled before packing, they should not be removed to a warm temperature during this procedure, but should be packed in a temperature not higher than 48 degrees. During storage they should be given a temperature of 30 degrees.

Pears should be stored at a relative humidity of 85%.

### Special Arrangements for Pre-cooling

Where pears are to be pre-cooled, you should plan to accomplish this by means of a cold storage warehouse. The system of pre-cooling where air is blown through the loaded car has been found to be inefficient, very expensive, and is fast becoming obsolete.

The design of the pre-cooling plant should be such that adequate space is allowed for your prospective tonnage. It must be remembered that part of your plant remains idle, so far as refrigeration is concerned, while you are receiving and filling the rooms and again while you are emptying them for storage or shipment. Consequently, your pre-cooling space should be from two to three times that which will be required for the actual cooling of the pears.

### What Size Room Is Best for Pre-Cooling

Small rooms are most efficient for pre-cooling. It is quite general practice to have rooms large enough for one day's pack. After filling with the day's pack, the room is closed and cooling takes place over a period of 36 to 48 hours.

Bartlett pears require very quick cooling after picking, and it is common practice to pre-cool this fruit before it is packed. This requires refrigerated packing rooms adjacent to the pre-cooling rooms.

Where quick cooling is to be done, it is necessary to have low temperatures. With frequent changes of fruit, this causes a very heavy formation of frost on the pipes which, of course, insulates them and reduces the efficiency of the plant to a marked degree. It is essential to arrange for the removal of the frost from the pipes during the period of operation.

Defrosting of pipes during operation can be accomplished by having duplicate coil rooms. The only alternative in meeting the defrosting problem is to have the pre-cooling rooms equipped with direct piping. This provides more pipe surface, allowing the work to be done with higher temperatures about the pipes which reduces the amount of frosting.

Where the air system of refrigeration is used in pre-cooling rooms it is very important that an equal distribution of cold air is provided. Some plants having the cold air released at one end of a long room with the exhaust at the opposite end, have done poor work in that they have quick cooling where the air is released, with very indifferent results in the region where the air is exhausted from the room.

Where possible, it is advisable to receive fruit and to take it out of the pre-cooling rooms through small curtained apertures just large enough to accommodate the packages. The conveyor or trucking space between the pre-cooling room and the iced car should be vestibuled so as to keep the cold fruit from coming in contact with the outside air which, of course, is warmer.

### Damage in Storage

Pears from certain districts develop a breaking down of the cell structure about the core of the fruit, while the outer appearance is in good merchantable condition. It has been found that pears from an extremely hot growing district are less subject to this than are those from districts having cooler temperatures either during the day or night.

The only preventative of this loss known is prompt cooling after harvesting and holding the fruit at low temperatures during shipment.

### Period of Storage

Early pears may be held only a short time under refrigeration. The Bartlett, however, which is by far the most important commercial variety grown in the United States and which matures earlier than most varieties, may be held in cold storage until nearly Christmas, although its commercial season does not last much beyond the month of October. It

is not uncommon to find the Bartlett pear held in storage for two months.

Other varieties such as the d'Anjou and Winter Nellis are held for fall and winter marketing until Christmas or after, with certain varieties extending over until the late winter months. Where care is given in handling the pear from the time of picking until the time of eating, storage operations are usually very profitable.

#### PLUMS MAY BE STORED FOR ABOUT TWO MONTHS

The plum responds to refrigeration more favorably than is generally supposed. While the nature of the fruit does not make it adaptable to long storage, yet it retains its quality and can be held for periods that prevent it from being dumped on over-loaded markets or from being entirely wasted.

Certain varieties, such as those of Japanese origin, can be held but a short time, while others, such as the Bradshaw, may be held for a month. The members of the prune branch of the plum family are very good keepers, and if they are not grown where brown rot is prevalent and where moisture prevails at the time of packing, may be held under refrigeration for two months.

Plums should be stored at a temperature of 32 degrees.

#### CHERRIES MAY BE STORED

Varieties of cherries are variable in their keeping qualities. Sour cherries do not have a long period of storage, being subject to a shriveling after two or three weeks.

Black varieties of the sweet cherry may be held for a month or even longer, although these are variable with variety and growing district.

The white, sweet cherries are perhaps the most unsatisfactory when held under refrigeration as they are subject to discoloration that detracts from their commercial value.

Cherries should be stored at a temperature of 32 degrees.

### **BERRIES USUALLY FROZEN FOR STORAGE**

Berries are not ordinarily held in cold storage except for a few days at a time unless they are frozen. Since their storage period is so short, the temperature at which they are held is not usually important providing it is below 38 degrees. Raspberries, blackberries, and loganberries respond well to a temperature of 30 degrees. There is some difference of opinion concerning whether so low a temperature is advisable for strawberries when they are to be marketed in the fresh state.

### **Freezing for Long Storage**

Where raspberries are to be used immediately after withdrawal from storage, it is possible to freeze them in small baskets and have them keep indefinitely. This practice has been developed to a large commercial extent with the blueberry or huckleberry. It is adopted in conjunction with pie-making, the berries being held in a frozen condition until the baker is ready to use them for his pastry.

### **Barreling on the Pacific Coast**

On the Pacific Coast, berries are stored for fountain or confectionery purposes by barreling. They are packed in 50 gallon barrels by placing a layer of berries in the barrel, then a layer of sugar, in the proportion of two pounds of berries to one pound of sugar.

Special packs contain three and four pounds of berries to one pound of sugar. Sometimes 10% or 15% of the entire pack is made up of straight berries without sugar.

They are placed in a cold storage room with a temperature of 10 degrees. After 10 days, they are held at a temperature of 15 degrees. In this manner, the berries are distributed in a comparatively fresh state during all periods of the year.

#### CANTALOUPE OF SOME KINDS HELD FOR WINTER

The cantaloupe belongs to the cucurbit family, and like many others in this family, is very sensitive when placed under refrigeration. It may be held for two to four weeks in a very satisfactory condition, loss being usually the result of mechanical injuries to the surface of the melon. Mold growth develops very rapidly about injuries, and ruins the flavor of the fruit.

Certain varieties of melons such as the Honey Dew and Casaba respond much more favorably to refrigeration than others, and being packed in excelsior and held at the lowest possible temperature that is considered safe, are held for winter months. A temperature of 34 degrees is as low as is usually used for cantaloupes.

#### POTATOES CHEAPLY STORED

Ordinarily, potatoes do not require refrigeration and a storage construction of a cheap nature may be employed for their successful storage. Pits, cellars, and common storages are mostly used for this vegetable. The ease of storage results in potatoes being stored near the shipping point.

Another factor that causes the storing of potatoes in a growing district, is the widespread production of this vegetable and the uncertainty of market conditions.

Cold storages are used only for holding for late spring markets and it often happens that potatoes are removed from common storages during the winter and moved into cold storages so as to prevent the growth of sprouts and wilting during the latter end of the storage period.

### **Preparation for Storage**

Potatoes should be free from serious damage caused by soil, sunburn, cuts, scab, rot, blight or other injuries, when placed in storage. They should be stored immediately after harvesting. It is not common practice to grade potatoes at the time of storage, but they are usually graded and sacked upon removal.

### **Cellar or Common Storage**

When stored in bulk, potatoes should be piled about five feet deep. They should be stored in bins that are separated by air spaces and that have slatted sides and bottoms. When stored in sacks or other containers, they should be spaced so as to be adequately ventilated. It is not advisable to place the potatoes on earth floors, regardless of whether stored in bulk or in containers.

### **Cold Storage Methods**

Potatoes should be put in sacks, crates or boxes when cold storage is used. They should be well spaced and so stacked as to prevent freezing or frost injury near the pipes.

It is desirable to store potatoes at temperatures below 40 degrees. It is not safe to have temperatures go below 34 degrees, as low temperatures cause the starch to change to sugar. The U. S. Department of Agriculture recommends a temperature not lower than 35 degrees.

The relative humidity of the storage should be 85%.

Low temperatures are necessary to prevent sprouting. It is desirable to keep common storages totally dark, to help prevent the growth of sprouts.

### Period of Storage

In good common storage, potatoes may be stored from three to five months without serious deterioration. In cold storage, they may be held for six months or longer and still remain in good condition.

### SWEET POTATO STORAGE

Sweet potatoes should be free from mechanical injuries, cracks, disease, or other types of injury when put into storage. They should be harvested during periods of dry weather so that they may be dry on their surface before removing to storage.

Sweet potatoes may be stored in bins, crates, or hampers, but should be in a relatively dry condition before removal to the curing rooms.

It is necessary to have a heating system in the curing rooms, that will maintain a temperature at about 85 degrees during the curing period, which will require from one to three weeks. During this period the warm air should be directed over the sweet potatoes to remove the moisture. When thoroughly cured, the sweet potato should present a bright, clear appearance, being dry, smooth, and velvety to the touch.

A temperature of 50 to 55 degrees should be maintained with the air very dry.

If handled in this manner, they may be stored from three to six months.



**HOW TO STORE ONIONS**

Onions should be thoroughly cured in the field, taking care to store only those that are free from serious blemish or injury and excluding those that seem immature, soft or "thick necked." They may be stored in crates or in slatted bins, allowing for ventilation in both cases.

A temperature of 32 degrees is best, cooling the onions as soon after they are field-cured as possible.

From three to six months is the common storage period.

**HOW TO STORE CABBAGE**

Use only good solid heads practically free from injury. Remove the loose leaves or those showing blemish. It is important to handle storage cabbage carefully during harvesting to prevent injury through which storage decays start.

In some districts it is common practice to store the heads, one layer deep, on slatted shelves to provide for ample ventilation. In other cases, they are stored in bins, three or four heads deep.

A temperature of 31 degrees is desirable although cabbage may be held for a considerable period of time at 32 to 35 degrees. A relative humidity of at least 85% is required. In common storages, it is difficult to provide this humidity and have adequate ventilation to maintain low temperatures.

The period of storage extends from November till April.

**HOW TO STORE CELERY**

It is important that good clean bunches be used, free from diseases or mechanical injuries. Remove all dead or wilted stalks. It is important to store in relatively small containers.

Celery should be stored at a temperature of 31 degrees.

Under cold storage, celery may be stored until February or March.

#### Storing in Trenches or Common Storage

When close to the market, it is the practice in some districts to store celery in common storage. The storage should be well ventilated so as to keep it as nearly 31 degrees as possible. The celery is stored unpacked by transplanting the bunches in sand, having but one layer over the floor of the cellar or storage.

For short periods, celery may be put in trenches in the field, covering so as to protect it from early frosts. In this case, boards are stood edgewise along the trench to prevent the soil from filling in around the bunches.

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#### WHAT COMES AFTER STORAGE?

Many a man who has stored fruits or vegetables successfully, has lost all that he has gained, by careless arrangements for moving the goods from storage to market. Transportation is one of the biggest subjects to be considered in the marketing of fruits and vegetables. And so, special treatment is given to this subject in the lessons that follow.

How can immense sums be saved on shipments of fruits and vegetables?

How can time be saved and higher prices secured?

How can you avoid paying excess charges on your shipments?

How can you secure necessary transportation information?

These questions, and more just as important, are answered in the lessons that follow.

## GLOSSARY OF MARKETING TERMS USED IN THIS LESSON

coil room. A room in a pre-cooling plant where the products are placed to be cooled, is called a coil room. Usually, artificial refrigeration is used and coils of pipes hold the refrigerant that cools the products.

de-frost, adj. The act of removing frost from refrigerator pipes.

drum package. A package made in the form of a drum, usually of wood or cardboard and commonly used for shipping grapes.

financial rating. An estimate of the financial standing and paying habits of a person or business concern. This estimate is commonly made and published by a commercial organization that makes this work its business.

gateway point. A town or city from which it is convenient to ship goods into a consuming territory. Usually a gateway point has more than one railroad and other transportation lines, and is near to more than one consuming center.

humidity, n. Dampness, moisture. The degree of humidity is estimated in percentage, and is determined by the scientific instrument known as a hygrometer. The percentage indicates how near the amount of moisture in the air approaches the saturation point. For example, when the humidity is 100%, the air is saturated with moisture; when it is 85%, it is within 15% of being saturated, and so on.

insulate, v. To separate from other conducting parts. For example, wood is a conductor of heat. Insulating material, such as ground cork, is not a good conductor of heat, and so when two pieces of wood are separated by a quantity of ground cork, the two pieces of wood are said to be insulated. Insulation is used in the construction of refrigerators and cold storage houses to prevent the heat absorbed by the outer walls from being conducted to the inner walls.

internal breakdown. A condition within fruit characterized by the decomposition or breakdown of the cells of the fruit. In the case of apples, the flesh near the core turns brown as the cells decay.

kiln dried. Dried in an oven or furnace.

loose (apples) adj. Apples stored in bulk without being placed in boxes, barrels, or other packages.

maturity. n. Full development. Differs from ripeness in that an apple may be matured, but still not ripe, which means it has reached its full size, but has not reached the stage where its elements begin to change in such a way as to bring about deterioration.

oil wrap. Oiled paper used to wrap individual fruits.

oxidization. n. The process of forming a compound with oxygen; a chemical process that takes place when fruits start to decay.

pre-cool. v. To lower the temperature of products before they are placed in a refrigerator car for shipment. Usually, the car has its temperature lowered before the fruit is placed in it.

ripeness. n. The state in which an article is ready to be used as food. The stage reached by fruits and vegetables after which the constituents of the fruit begin to change (usually by oxidization) into a condition which eventually renders them unfit for use.

routing. (of a car) n. A planned course of travel.

scald. n. A disturbance occurring on the skin of an apple, resulting in a discoloration and a commercial loss on the fruit.

seasonal advantage. An advantage which may be secured only at a particular season of a year, usually a short season.

storage-in-transit. n. A privilege granted to a shipper by a carrier, whereby the shipper stopping a shipment en route to be stored for a year or less, may have the benefit of the through rate when the goods are again shipped to their final destination.

transportation insurance. Insurance against loss or damage of goods while in transit.





# Transportation of Fruits and Vegetables

BY EDWIN SMITH



MARKETING FRUITS AND VEGETABLES

LESSON 5

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Issued for Members

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The American Institute of Agriculture  
CHICAGO





## HOW TO STUDY THIS LESSON

### The Purposes of This Lesson

You should learn eight things from this lesson--eight important "hows":

1. How to make shipments
2. How to have shipments protected
3. How to save freight
4. How to take advantage of transit privileges
5. How to prevent transit losses
6. How to collect claims
7. How to secure an adequate car supply
8. How to make export shipments

In your eagerness to learn about these eight exceedingly important subjects, you will probably be inclined to spend five or six study periods on this lesson. You can easily see that it is one of the most important lessons in the course.

### Local Men Can Help You

In studying Part I, it will be particularly helpful to talk with the manager of some shipping association, if that is possible. The next best thing would be to talk with the traffic manager of some manufacturing concern.

In such conversation, ask to be shown samples of car orders, transit cards, records of diversions, sample diversion orders, and any other documents used in connection with shipments.

### What to Ask Your Local Freight Agent

It will also be advisable to talk with your local freight agent. Ask him what difficulties arise when a shipper does not supply all of the necessary information in ordering a car. Ask him what points are most often omitted in car orders. Ask him what percentage of shipments from his station is made with straight bills of lading, and what percentage is made with order bills of lading.

If you are in a fruit shipping section, ask your agent as to the kinds of protective service used by shippers there. In other words, try to get a very definite picture of the traffic situation at your particular station.

### Why It Pays to Talk With Others

You realize, of course, that the advantage of talking these matters over with men actually engaged in the business is so great that you cannot afford to slight it. This is an opportunity that you have when you study at home, which you probably would not have had if you were in a college.

At the same time that you learn from these men, you establish an acquaintance and relationship that will make it much easier for you to get the best service when you have shipments to make. The very fact that you are trying to learn, and that you know something about transportation will make your local agent and the managers of local concerns glad to help you all they can.

### How to Get Local Illustrations

In the course of studying Part II, a number of questions will arise that may best be answered by these same people with whom you have talked about Part I.

The points regarding the transit losses will be much more firmly fixed in your mind if you learn of some actual losses that have occurred, especially if you learn what caused those losses.

If there is an icing station in your city, or somewhere near, by all means take the opportunity of watching the process of icing.

In studying the section regarding the securing of an adequate car supply, try to get some information from local traffic managers. Each station agent has certain peculiarities. One method will influence one agent, and another method will influence another. Successful traffic managers study their agents and devise various means of influencing the agent to do his best to supply the needed cars. You may be able to secure, in this way, a number of very practical plans for insuring an adequate car supply.

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# **TRANSPORTATION OF FRUITS AND VEGETABLES**

**By EDWIN SMITH\***

In marketing fruits and vegetables, some of your most difficult problems will group themselves around transportation. So important is this phase of marketing that operators having any considerable volume to handle, find a traffic manager indispensable.

A good traffic manager, preferably of railroad experience, well versed in the requirements of the commodity which you are to market and familiar with the field where your markets are located, will save many times his salary in preventing routings that will entail "combination rates" (which are higher) instead of "through rates"; in preventing transit losses; and in collecting claims from the carriers that the operator himself would overlook or that he would be too busy to bother with.

## **PART I**

### **HOW TO MAKE THE SHIPMENT**

This lesson is not designed to train you as a traffic manager (as far as the author knows the only satisfactory training for this field is that secured in the school of experience) but it is intended to give you grasp enough of shipping and traffic matters so that you can handle your transportation intelligently pending the time you are in a position to employ an experienced man who can devote all of his time to this work, and so that you will know how to use a traffic manager when you employ one.

Always order your cars in writing. Railroads have their respective tariff rules as to the length

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\*Secretary Fruit Export Corporation, Seattle, Washington; for complete statement of his experience, see Lesson 4.

of time they require a car to be ordered before it is desired, and you should familiarize yourself with the rules of the roads at your shipping point.

### How to Order a Car

The order should include the following information:

1. Date
2. Your address
3. Character of car desired (box, ventilated, refrigerator)
4. Commodity to be loaded
5. Date wanted
6. Where you desire car "spotted"
7. The character of service that the shipment is to be made under (ventilation, refrigeration, carrier's protective service, shipper's protective service, or common car service)
8. Destination

The order should be directed to the local agent at the shipping point and should be signed by the shipper. Always keep a carbon copy of your car order. See Figure I.

### What Is a Straight Bill of Lading?

There are two forms of the bill of lading, the "straight bill of lading" and the "order bill of lading." The straight bill of lading is used in all direct or open shipments where the goods have been paid for in advance or where the buyer is prompt in making payment.

### An Order Bill of Lading Helps Collections

If payment is to be deferred until the shipment reaches its destination and you wish to surrender ownership of the goods only upon payment of the invoice after their arrival, an order bill of lading is used. In this case the bill of lading, accompanied

## CAR ORDER WELLS & WADE FRUIT CO.

Wenatchee Wash., October 3 1922  
Agent Great Northern Ry Co.,

Wenatchee Wash.  
Please furnish the number of refrigerator cars for loading of Apples  
for the account of Wells & Wade Fruit Co., as indicated by numbers, dates, and character of service below.

DATE WANTED	NO. OF CARS	SPOT AT	PROTECTIVE SERVICE			
			Vent.	Ice	Cps	Sps
10/5 1922	2	Warehouse @		X		
10/5 1922	2	Columbia Ice & Cold Stg.	X			
1922						
1922						
1922						
1922						
1922						
1922						
1922						
1922						

This fruit is to be shipped to Chicago, Illinois. All cars furnished on this order should be large enough to permit of loading the regular number of boxes or crates, but always large enough to take the tariff minimum weights.

REMARKS: Kindly spot cars so that loading may  
start at 8:00 AM on the day ordered.

This order received by  
GREAT NORTHERN RY. CO.

Yours Truly,

WELLS & WADE FRUIT CO.

Per John Doe Agent

Per H. H. M.

### FIGURE 1. SAMPLE OF A CAR ORDER

Car orders should be filled out and filed regularly with the railroad company, regardless of whether or not the railroad has cars to fill orders. You are more likely to get cars if you follow this plan

by an invoice of the goods, and a draft for the amount due, are taken to your bank, which, in turn, sends the documents to its correspondent bank in the city of the buyer.

As soon as the consignee pays the draft, the bank in his city surrenders the order bill of lading to him and the carrier then allows him to take possession of the goods, but not until then.

The delivering railroad has no right to turn the shipment over to the consignee until he has presented the order bill of lading, properly indorsed.

Instead of using an order bill of lading which absolutely requires its surrender before the car can be released, not permitting the use of the shipper's delivery order, many shippers prefer to use a straight bill of lading, consigning to themselves, but using the term "advise consignee". This allows the release of the car from the carrier on a shipper's delivery order, which may be in the form of a telegram. This advises the delivering road to deliver the car upon payment of freight.

### Protective Service Must Be Specified

In executing a bill of lading for the shipment of a carload of fruits or vegetables, in addition to filling out all of the forms relating to consignee, destination, route, number of packages, weight, etc., it is necessary for the shipper to state in writing whether or not the shipment is tendered for transportation under refrigeration, non-refrigeration, icing, ventilation; or under protective service against cold. The following notations should be used:

1. Under refrigeration. (If salt is desired, shipper must specify percentage)
2. Under standard ventilation
3. Keep all ventilators and (or) hatches closed and plugs in to final destination regardless of weather
4. Keep all ventilators and (or) hatches open and plugs out to final destination regardless of weather
5. Common car service

After October 15 and until April 15 within the territory specified in Perishable Protective Tariff No. 1, the following notations should be used:

1. Shipper's protective service, or,
2. Carrier's protective service

This does not mean that you cannot use the instructions, "Under refrigeration" in this territory after October 15, but if refrigeration is used,

the carrier does not assume responsibility for freezing losses.

These services are explained more fully on later pages.

### HOW TO SHIP A "ROLLER"

It is very common in shipping perishable fruits and vegetables over long distances that a sale has not been made at the time of shipment. The maturity of the goods either does not allow their being held up until a sale is made or the shipper has a selling organization that allows him to make sales while the goods are in transit, so that he is in a position to load cars and start them "rolling" as soon as harvested, working upon their sale while they are moving toward their probable destination. Such cars are commonly called "tramp cars."

### How "Tramp Cars" Are Handled

In this case, temporary destination is chosen in the general direction of and in reasonable proximity to the territory in which you wish to make sale. For instance, in shipping a "roller" out of Florida for probable sale in Northern Atlantic states, the car would be billed to Potomac Yards, Virginia, the most important diversion point on the Atlantic Coast. From California for probable sale in the Middle West, it would be billed to Omaha, Nebraska, or Topeka, Kansas; or, if it is a shipment from the Northwestern states to a sale territory east of the Mississippi, Minneapolis, Minnesota, would probably be chosen.

In handling "rollers," it is necessary to keep a very close record as to the location of the car from day to day so that it will not arrive at its fictitious destination before you file diversion orders.

When diversion orders are filed after the car arrives at its destination, railroads make a charge for diverting.



A record of location is accomplished in two ways: first, by keeping a car record before you and having a fairly close knowledge of the schedule of the train service over the route; second, by securing passing reports from your local railroad or from the traveling agents of the foreign lines. Some small shippers keep this record on the outside of an envelope containing the various records of the shipment, such as manifest, invoice, bill of lading, etc., while others have a form for the record printed upon a stiff card, convenient for filing, as shown in Figure 2.

#### When to Use a "Transit Card"

Where a car of produce is stored in transit, it is convenient to have another form covering the items involved in the transaction, which card is fastened to the car card, because, while the car is stored in transit, the shipment of this particular lot is not completed and all records pertaining thereto must be kept on file, ready for instant reference. A sample of such a card is shown as Figure 3.

#### "Straight Bills of Lading" for "Roller" Shipments

In making out a bill of lading for a "roller," a straight bill of lading (B/L) is used and the car is consigned to the shipper or the shipper's agent. The B/L is not forwarded, but is held in the shipper's file. If sale is made, it is necessary for him to send a written delivery order or a telegram (depending upon the time between sale and delivery), to the delivering railroad instructing them to deliver the car to the buyer without the B/L. If the shipper has a branch office, agent, or broker in the vicinity of the buyer, he will probably be given authority to issue delivery orders.

#### How to Route the Shipment

By using a railroad map, it is a comparatively easy matter for the shipper to select the connecting

\*SPACES SHOWING STARS ARE NOT TO BE FILLED IN BY SHIPPER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31											
LOADED AT Wenatchee						DATE SHIPPED 10/5						ICED OR VENT. Iced						SHIPPER AND P. O. ADDRESS Sunnyslope Fruit Fruit Exchange																							
BILLED TO NAME Chicago						DESTINATION Chicago						ROUTING GN - CBAQ															★ CODE 403	★ HBL. NO. 403													
★ 1ST DIVISION Chicago						★ DATE 15						★ DESTINATION New York						★ ROUTING IHB - Erie						★ CO-REC. BY & DATE						★ ADMS. REC. NO. 369						★ NAME ORDER NO.					
★ 2ND DIVISION																								★ DATE SALE ARTISE SENT						★ BULLETIN NUMBER						★ DATE					
★ 3RD DIVISION																														STATE DEFINITELY WHAT LABELS USED ON EACH GRADE											

VARIETY	GRADE	GROUP 1 35 54		GROUP 2 72 90 98 96			GROUP 3 100 104 112 128			GROUP 4 128 150 180 192			GROUP 5 172 192 200			TOTAL	★ PRICE
Rome																	
Beauty X-Poy				42	92	230	120								85	565	
Poy				22	42	117								10	91		

CANCELLED

FIGURE 2. SAMPLE CAR RECORD CARD

By knowing the schedule of your railroad, you can check the probable date of arrival at the top of the card. Thus you will be reminded that the car must be diverted or given disposition by the date of the month checked. The second check may be used to indicate when the car will be due to arrive at its next destination

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
STORED AT U. S. O. O.			DATE STORED 10/15			STORAGE LOT NO. 4025			AMOUNT \$1512.00			INSURANCE AMOUNT PREMIUM 60¢			DATE PAID 2/6			REG. NO. 403			CAR NO. GM49460									
Chicago			DATE ORDERED OUT 2/2			DATE BILLED 2/2			DESTINATION New York			FREIGHT CHARGES AMOUNT \$561.33			INTEREST \$12.16			NEW CAR NO. PF55623												
Steinhardt & Kelly			ROUTING			DIVERSION			DATE			ROUTING																		
U. S. Cold Storage Co.			INSPECTION BY WHOM			DATE			STORAGE Rate			25¢ to April 1st.																		
1/25			U. S. Cold Storage Co.			CANCELED			Storage Charges			\$189.00																		

FIGURE 3. SAMPLE OF A TRANSIT CARD FOR KEEPING STORAGE RECORDS

It is exceedingly important to keep all of the details regarding shipments that are stored in transit. A card something like this one is convenient for reference and will provide all of the necessary information when costs are being calculated on shipments, or when claims are being made. The numbers at the top are checked to indicate the date on which to order goods out of storage

lines over which he will route his shipment when it is going to a known destination. In order to have the through rate apply, attention must be paid to have the route in the general direction of the ultimate destination.

### How to Save Freight on Refused Shipments

There is one precaution that should always be taken; guard against the event of your shipment being refused by the consignee upon its arrival. In the event consignee refuses shipment, you may want to divert it to another market, and so your shipment should arrive at the first destination over a route that will allow it to move on in the same general direction, so that through rates apply.

As an example: a car of peaches from Yakima, Washington to Kansas City, Missouri, might be shipped over the Northern Pacific to Minneapolis, and then over the Chicago Great Western to Kansas City on the through route. Yet, if for some reason, the shipment is rejected when it reaches Kansas City and you desire to sell it in Chicago, you would be confronted with paying the local rate from Kansas City to Chicago. However, had you routed the shipment: Northern Pacific to Billings, and Chicago, Burlington & Quincy to destination, you could divert the shipment from Kansas City to Chicago and have the through rate apply.

### Open Billing

You are usually fairly safe in making an "open billing" (the railroad company determines the route), in which case the railroad serving you will furnish the routing over the connecting lines. In making open billing, you should use the notation on the bill of lading, "The through rate to be protected to destination."

**Caution Required When Designating Route**—If you are designating the route of your shipment, caution is required in shipping "rollers" and cars to be stored in transit. In shipping cars to be stored in transit, you should determine from your storage company the names of the delivery roads that

**WENATCHEE PRODUCE COMPANY**

Wenatchee, Washington

October 10 1922

Agent: GREAT NORTHERN RAILWAY COMPANY,

Wenatchee, Washington

File No. 403

Car GN 49460

From Wenatchee

Date October 5, 1922

Commodity Apples

Destination New York

Consigned North American Fruit Exchange Advise Steinhardt & Kelly

Routed G.N. - C.B.&Q. - I.H.B. - Erie.

CHANGE TO FIVE

Consignor Wenatchee Produce Co.

Consignee North American Fruit Exchange

Advise T.C. Bottom Produce Co., Destination Kansas City, Mo.

Route G.N. - C.G.W.

Remarks: Protect thru rate.

Agent's Signature

WENATCHEE PRODUCE CO.

Time Filed 10:00 A. M.

By *A.A.K.*

**FIGURE 4. SAMPLE OF A DIVERSION ORDER**

It is important to have the hour of filing this order, since whether or not it is filed prior to the time of arrival at the car's destination may make a difference in your charges

will allow you the storage-in-transit privilege and still let the shipment leave the storage in the direction of markets to which you are likely to ship from storage.

**Diversions and How to Make Them**

Rules applying to diversions differ with the various tariffs of railroads and freight bureaus. You should become familiar with these through the traffic department of the railroads over which you are shipping your goods. In many instances, you

have the privilege to divert your car free of charge if diversion orders are filed prior to the time of arrival of the car at the original destination; usually a charge is made if the car arrives before you file such an order.

### How to File Diversion Order

The diversion order should be filed with your local railroad agent. Diversions can be accomplished by ordering direct to the connecting line by telegraph or through its traveling agent, but in

---

Please make the following diversion:

#### As Billed

Car No. \_\_\_\_\_ Initial \_\_\_\_\_ Contents \_\_\_\_\_  
Bill of Lading issued at \_\_\_\_\_  
on (date) \_\_\_\_\_ Last destination \_\_\_\_\_  
Consignee \_\_\_\_\_ Routed \_\_\_\_\_

#### Changed to Read

Consignee \_\_\_\_\_ Destination \_\_\_\_\_  
Route \_\_\_\_\_

If through rate does not apply, advise before making diversion.

Filed at (hour) \_\_\_\_\_ on (date) \_\_\_\_\_  
\_\_\_\_\_ Railroad Company.

(Signature) \_\_\_\_\_

Agent.

Firm Name

Per \_\_\_\_\_

(Signature)

---

most cases the local agent will take care of the diversion for you.

A printed form for diversion orders should be used similar to the one shown as Figure 4. In case you desire to issue memorandum diversion orders to your agent, such a memorandum should read like the one reproduced on this page.

### How to Avoid Demurrage

Demurrage rules are covered by a tariff that has quite universal application all over the United States. At present, 48 hours free time are allowed for the shipper for loading and a similar period for the consignee for unloading, not including Sundays and holidays. A charge (demurrage) is made for additional time.

In the case of a car in transit which has reached its original destination but which is diverted after it reaches the destination, 24 hours free time is allowed. After the expiration of the free time, a demurrage charge of \$2 per day is made for the first four days, after which this charge is increased to \$5 per day. These charges are made under tariffs which are subject to change at any time.

Demurrage may be avoided by:

1. Ordering cars carefully for known loads
2. Following the movement of the car carefully and placing diversion orders promptly
3. Arranging for the disposition of the car prior to its arrival at final destination

### How to Secure Passing Reports

In order to follow closely the movement of a car, passing reports are useful. These may be secured from your local agent or through the traveling agents of connecting lines. It is convenient to have post cards printed on which agents may report the time your shipment passes their stations.

### How to Deliver a Car Without a Bill of Lading

Shippers of fruits and vegetables have found the delivery order more convenient than the bill of lading, consequently many do not forward the bill of lading except where an order bill of lading is used as a document for banking purposes. A written or telegraphic order to the delivering railroad is

# NORTH AMERICAN FRUIT EXCHANGE

Agent, Erie Railroad, New York.  
AGENT RAILROAD

WENATCHEE, WASH..      October 20, 1922

PLEASE DELIVER TO      Steinhardt & Kelly  
CONTAINING      Apples

OR ORDER. CAR NO 49460

ON PRESENTATION OF THIS WRITTEN ORDER, WITHOUT ORIGINAL BILL OF LADING, ON PAYMENT OF FREIGHT AND ALL OTHER CHARGES.

NORTH AMERICAN FRUIT EXCHANGE

BY John Doe FOR TREAS.

WENATCHEE PRINTING CO.

FIGURE 5. SAMPLE OF A DELIVERY ORDER

Such an order is used with a straight bill of lading, the original bill of lading being retained by the shipper. When time does not allow the mails to get the delivery order to the delivering railroad quickly enough, similar instructions may be telegraphed and the railroad will honor such order and deliver the goods



used instead. If you will consider the difficulties entailed in having the bill of lading reach the consignee at just the right time in the case of "rollers", or in handling the bill of lading when it has been sent to buyer who rejects the car after reaching its destination, you will easily appreciate the convenience of using such an order. (See Figure 5.)

The delivery order should give the number and initials and be directed to the agent of the delivering railroad at destination and should authorize him to deliver the car upon payment of freight charges, but without the bill of lading, to the person or firm to which you are surrendering possession.

In cases where you have a local branch of your firm, an agent or authorized broker in the city of arrival, it is convenient to have your representative serve a delivery order on the delivering line.

### How to Calculate Freight Charges

It is important to become familiar enough with tariffs so that you can compute the various transportation charges accurately. These charges will not only include the transportation charge, but will also cover such items as refrigeration, diversions, demurrage, storage in transit, icing at destination, and terminal switching.

This is very important where you pay the freight or where you are acting as a sales agent and possibly may be responsible for the payment of undercharges which the railroad may seek to collect after you have made distribution of sales returns to your patrons.

### Make Out Schedule of Charges

It is a very advisable practice to make out a schedule of freight, refrigeration, and heater charges per 100 pounds and per package from your shipping point to your principal markets and to all of the states of the Union and provinces of Canada,

prior to your active shipping season. In this way, it will be possible for you to calculate your freight charges very quickly during the busy season. If it is difficult for you to read a freight tariff, you should be able to secure help from the tariff department of your railroad.

## PART II

### HOW TO PREVENT TRANSIT LOSSES

No matter whether it is a sweet potato or the most tender variety of raspberries, there is not a fruit or vegetable that does not respond strikingly to careful handling during harvesting. The principal decays causing the deterioration of fruits and vegetables in transit and storage have their beginnings in injuries to the skin or flesh prior to the time they are put on the road to market. Losses from decay resulting from broken skin or punctured flesh are so enormous that every operation from the time the product is taken from vine, bush, or tree until it is safely braced in the car should be carefully guarded so that mechanical injuries may be prevented.

#### Use Strong, Light Packages

Packages that will not break easily and that are well adapted to loading in a freight car or ship, should always be selected. Many railroads have published circulars on standard containers for railroad shipment in an endeavor to prevent loss and damage claims from breakage.

The fruit should be well packed so that it will not shake around in the package while in transit.

In packing fruits or vegetables for transportation in carload lots, it should always be remembered that the journey of the package does not cease

when the car is unloaded, but that it often happens that the package is hauled by truck to a wholesale store, to be again hauled to an express office, then to be shipped in a less than car-lot shipment to a small station, where it again undergoes hauling. If more thought could be given to the possible transportation that your produce undergoes, it is certain that more pains would be taken in its preparation.

Neglect Results in Loss—Much loss in transit is due to no other cause than the neglect of the fruit or vegetable prior to the time of shipment. An outstanding example of this is the apple. Under certain conditions of storage, some varieties of apples develop scald, which greatly destroys their commercial value. Varieties of apples susceptible to scald when held under storage conditions that are conducive to its development, require only the higher temperature which will be encountered in a heated or ventilated car to make the scald appear.

When the shipment arrives at its destination, the apples are in a badly scalded condition. Since they were in an apparently sound condition when they were loaded into the car, the conclusion is drawn that the scald was caused in transit. This conclusion is erroneous, because in reality, the scald was actually caused by unfavorable storage conditions prior to the time of shipment.

### Losses from Delay in Picking

Another example would be the Bartlett pear that has encountered three or four days' delay between picking and the time of being placed under refrigeration. The high temperature under which it has stood after picking has hastened the changing of its starches to sucrose, and has caused its sugar to be reduced to an invert sugar, the rapidity of these changes marking the length of time the fruit can remain in an edible condition.

Yet these changes in starch and sugar are not apparent at the time the Bartlett pears are packed and loaded in the cars. To all appearances, the fruit is just as firm and green as when first picked. At the end of the journey, the fruit is examined and is found to be in a very over-ripe condition.

The owner may lay the trouble to the character of refrigeration given the shipment, whereas the real cause of the loss is due to the rapid rate of ripening resulting from being subjected to high temperatures for an unduly long time between picking and shipping.

### How Good Storage Reduces Transportation Costs

Good storage at shipping point reduces transportation costs in two ways. First, it often allows you to assemble carloads over several days when not enough is secured in one day to make a carload. Second, it slows up ripening during the period that the produce is waiting for shipment.

### When Pre-cooling Plants Are Necessary

With certain fruits and vegetables it is advisable to use cold storage plants for pre-cooling before loading. The refrigerator car in some cases is inadequate to reduce the temperature of the produce sufficiently low in a short enough time to retard ripening properly during transit. This is especially true when fruits are shipped long distances.

The shippers in the Yakima District in Washington, in marketing 2,000 cars of Bartlett pears, found it necessary to provide shipping point pre-cooling plants, in order that they might market their fruit in eastern markets in a fresh state without prohibitive losses from deterioration in transit.

Incidentally, these pre-cooling plants allow the Yakima shippers to spread out their shipments

of this highly perishable fruit over a period of two months, thereby taking advantage of the higher prices after competitive pears are off the markets.

Later in the year, these plants are used for the storage of apples, and still later, after the removal of the apples, potatoes are transferred from common storehouses and kept from sprouting in the same cold rooms.

### What Pre-cooling Costs

The orange shippers of Southern California greatly reduce their transportation costs during the larger part of the year by providing themselves with their own shipping-point pre-cooling plants. By thoroughly cooling oranges prior to shipment, they are able to send them through to their Atlantic destination with only the original icing, which ice they manufacture in their own plant.

The cost of pre-cooling and pre-icing the car is variable, but different plants give it from \$35 to \$50 per car. If they were to pay the railroads stated refrigeration charges, it would entail an expense of \$125 on a shipment to New York City. Thus the California shippers save from \$75 to \$90 per car by furnishing their own refrigeration.

### PROTECTION IN TRANSIT

For the most part, fruits and vegetables should be shipped in refrigerator cars. The tariff specifies that shipments should be made under

1. Refrigeration
2. Standard ventilation
3. Common car service

After October 15 till April 15 shipments are to be made either under

4. Carrier's protective service or
5. Shipper's protective service

Carrier's protective service is a service performed by carriers through which perishable goods are protected while in transit, for which the shipper pays a specific charge, the carrier assuming the liability of damage. Examples are: refrigerator service and heating service.

Shipper's protective service is an arrangement with a railroad company whereby the shipper assumes all liability of losses from freezing not due to carrier's negligence. The railroad company provides free transportation for a messenger to accompany the shipment for the purpose of protecting it.

#### When to Ship Under Refrigeration

Only a knowledge of the condition of your product as it arrives upon the market, can enable you to determine when to use refrigeration. The experience of shippers in your district will assist in determining facts on condition of arrival.

#### Vegetables That Require Refrigeration

Vegetables that are of a leafy nature, such as cabbage, lettuce, or celery must usually be shipped under refrigeration during warm weather because they have a rapid respiration and generate a great amount of heat.

There are certain vegetables that might safely be shipped under ventilation so far as decay is concerned, but experience has shown that refrigeration will more than repay for its cost in preventing shrinkage in weight. New potatoes moving long distances are a striking example of this class of vegetables. Some vegetables require more refrigeration than the refrigerator car can give them through the ice in its bunkers, and, as in the case of shipping Texas spinach, ice is placed in the package with the product at the time of packing.

### Refrigeration a Good Insurance

Refrigeration is good insurance. Even in sections like the peach district of Michigan, where many of the shipments move short distances to market, the icing of the cars is a necessity for insuring their delivery in a satisfactory condition.

Practically every fruit to be shipped in a refrigerator car responds favorably to refrigeration with the single exception of lemons. Refrigeration is used with this fruit only during very warm periods of the summer when the fruit is known to be "weak". For good fresh lemons, ventilation only is used even during most of the summer months.

### Railroads Sometimes Pre-cool

In California, some of the railroads offer a pre-cooling service, and in Florida, as well as in California, various services are offered where the shipper may do the pre-cooling and various icing services given by the carrier. You are referred to Perishable Protective Tariff No. 1, a uniform tariff for all railroads, and its supplements for details concerning these various services.

### How Salt Helps Cool Cars

It requires from three to four days in a refrigerator car to remove the heat of the produce to the point that the average refrigerator car will maintain. It is very beneficial when shipping such highly perishable products as berries, peaches, or pears to get a more rapid cooling by the use of salt.

Crushed rock salt should be used, placing from 3% to 7% with crushed ice in the upper part of the bunker during the initial icing. The higher percentage should be used only in case the produce is very warm and when the loading is such that there will be no obstruction to the flow of cold air from the ice bunker to the air channel beneath the floor racks of the refrigerator car. If the cold air is dammed

up on its way to the air channel, severe freezing may take place.

When salt is used with the ice, floor racks should always be used, the bunker bulkheads should be insulated, and there should be a free passage of air from the bunker.

When extremely hot weather is encountered, from 100 to 200 pounds of salt added to each bunker at the first re-icing will assist materially in the cooling and will give lower temperatures en route.

### Refrigeration and Artificial Heat Combined

There are occasions when winter shipments from the south require refrigeration at the outset and artificial heat when they reach northern states. This service is granted in the territory covered by carrier's protective service. However, where there is ice in the bunkers to be removed, an additional charge is made for this labor.

Shipments originating in northern states and moving to the warm regions of the south under carrier's protective service or under shipper's protective service, may be put under refrigeration at any point.

To secure either of these services requires your giving written instructions to your local agent as to the change desired and as to the point where you want the change made.

A shipper is not allowed the privilege of making any other changes in the character of services than those mentioned, so that if you desire to change from standard ventilation to carrier's protective service or to refrigeration, or from either of these to standard ventilation, your wishes will not be granted. These provisions are made under tariff and are subject to change.



Certain districts of the United States have tariff provisions that provide the shipper in those districts special refrigeration service at charges in accord with the service rendered. Your attention is called to the "half tank icing" made use of by shippers of Florida fruits and vegetables. Shipments originating during winter months in this district often require only a limited amount of refrigeration at the outset of the journey. To meet this condition, half tank icing is provided.

### When to Use Standard Ventilation

Standard ventilation should be used with caution to secure satisfactory results. This service provides that ventilators be closed when the outside temperature falls below 32 degrees and that they be opened when it rises above that point. Many products moving out of warm fields will thus have ventilators closed during cool fall nights just when the outside temperature reaches the most satisfactory point for cooling.

Most fruits will not freeze at a temperature above 28 degrees, and when in a warm state, will not be injured by a temperature of several degrees below freezing for several hours at a time. Standard ventilation often shuts off the cold night air just at a time when it is most needed.

During the warm fall days when the temperature of the outside air rises above 32 degrees, the ventilators are opened and the fruit or vegetables are exposed to days of warm, balmy air, when for the load's best preservation the ventilators should be closed.

When refrigeration is used, the ice plugs are in place and the ice cools the produce to a temperature that is favorable for the best keeping of the produce. This gives the shipper much more assurance that the shipment is receiving a protection that will better guard his interests than if the shipment were made under ventilation.

For this reason, refrigeration should be used very late in the fall and early in the spring, as well as during the extremely hot part of the summer, with all but the most hardy classes of fruits and vegetables that have a reasonably long distance to move.

### When to Use Common Car Service

The instructions "Common Car Service" are used when shipping fruits or vegetables in box cars. Common car service may be used with many of the less perishable fruits and vegetables, such as apples, oranges, some varieties of pears, potatoes, cabbage, and onions when the shipments are to move but short distances in temperate weather.

During the greater part of the fall, it is advisable to use box cars for potatoes, thus releasing the refrigerator cars for the more perishable products.

In times of serious car shortages, it is often preferable to ship such products as apples long distances in box cars rather than have the fruit remain a long time in the orchard awaiting shipment, even though the box car may be inadequate for the proper protection of the fruit as compared to the protection offered by a refrigerator car.

### When to Use Carrier's Protective Service

When your shipment is in danger of being frozen in transit, this class of service should be requested. The cost will add to your expenses, but the service will give you some degree of protection against freezing and places the responsibility of protecting against this loss upon the railroad. Otherwise you would be assuming the liability.

Carrier's protection service is not given in states east of Indiana-Illinois state line, at the present time, so that on shipments moving east or west this service starts or leaves off just as the

shipment passes into or from the territory where the service is given. An exact knowledge of the limits of this territory may be secured from Perishable Protective Tariff No. 1 and its supplements.

The use of carrier's protective service should be discontinued during the late winter months at a date as early as will avoid extremely cold weather in transit and refrigeration should be substituted for the reason that there is much danger from over-heating fruits and vegetables when this service is used.

This precaution is emphasized in connection with apple shipments that have been in storage prior to shipment. This fruit is in a weakened state due to its storage period, and does not have the vitality to withstand the high temperatures that may result from over-heating due to the unwise application of heat by the railway company during the late winter months.

#### When to Use Shipper's Protective Service

This service applies to the same territory as carrier's protective service, and provides that the railroad company will furnish free transportation to a messenger accompanying the car, with return transportation to point of shipment. Under this service, the shipper assumes all liability for loss from freezing not due to carrier's negligence, but is relieved of all charges other than the freight charges.

Shipper's protective service is used during those periods after October 15 and before April 15, when the produce is of such a nature and the weather is in a state that does not make danger from freezing probable nor the use of refrigeration necessary. The expense of heating and cooling are thus saved. It is also used with such products as bulk potatoes that do not lend themselves to loading that will give protection by ordinary methods, and with such other

shipments that require special protective measures that only a messenger can give.

### Careful Loading Necessary

In securing transit protection to fruits and vegetables, not only must we protect the shipment against those factors of heat and cold that cause deterioration, but we must also afford protection against breakage. This may be accomplished through the strength of the package and through its secure and rigid loading. A great deal of study should be given by the student to the suitability of the packages he uses. The successful shipper will always select a package that is sure to reach the consumer in good condition.

With a good package, the load may be securely braced so that no shifting will take place as the car is shunted about the railroad yards or started or stopped suddenly on the road.

Even the rigidly built refrigerator car is undergoing a continual weaving motion from the start of the journey to the end, which causes a movement of packages that often works the nails out of the strips that are placed across the top of the load, long before the car reaches its destination.

In addition to swaying, the car often gets to jumping on its springs, particularly in the case of refrigerator cars of less rigid construction. This fairly jumps the load loose from its bracing. The load cannot be put in too securely nor braced too rigidly.

### How to Brace a Load

All boxes or crates should be so placed that the package's greatest strength is offered to the end-thrusts of the car. The packages should be held securely with strips across the width of the car to prevent tipping or shifting out of place.

All car loaders should be checked up from time to time to be sure that they are not stripping their cars carelessly and that they are placing the stacks of packages tightly toward the ends of the car. Bracing will not protect a loosely loaded car.

And finally, the load must be braced so as to prevent all possibility of the bracing breaking down.

One of the greatest precautions in preventing the breaking down of the center bracing of a car is to see that the bunker bulkheads in every car are rigidly in place with fastenings that will prevent their swaying away from the load, allowing the load to move bodily away from and toward the bracing.

### How to Load Various Packages

Barrels are most commonly loaded on their sides, with ends toward the sides of the car. When loaded in this manner, the nature of the barrel is such that it braces itself.

The bushel basket is loaded in a multitude of ways, but the most popular and one of the best methods is the "four-three pack." Four baskets are placed against the bunker bulkhead, with three in the next layer above and three in the bottom layer of the stack immediately in front. This method of stacking allows one basket to sit directly above the edges of four beneath it and uses all the strength there is in the basket. By using this method of stacking and using center gates with rigid bracing, a very satisfactory load may be installed.

In loading the hamper, the same general principles should be used as in loading the bushel basket.

One of the most difficult packages to load satisfactorily is the Climax basket, which is used extensively in shipping eastern grapes. On account of the

baskets not fully filling up the space across the car and their decided tendency to fall, much breakage ensues. Through investigations by the United States Department of Agriculture, a method of loading was devised whereby this difficulty could be overcome by placing the last row of baskets diagonally so as to fill up all of the space intervening between the load and the side of the car. With a little practice and patience, this type of load can be worked out without additional expense and a great saving from breakage loss can be effected.

### How to Load Bulk Products

There are two things to take into consideration in loading in bulk:

1. Protection against heat or cold
2. Removal

With such products as are loaded in bulk, very little precaution is taken against protection from heat. Certain methods have been worked out with the shipment of early cabbage that allows for the circulation of the air from the ventilators through the body of the load. This is accomplished by installing an inverted V-shaped rack in the center of the load.

For protection of bulk loads against cold, the most effective method has been to provide an air channel completely around the load so that when a stove is placed in the center of the car, the heat, rising to the ceiling of the car, may flow to the ends and sides, down to the floor and be drawn through the air channel toward the center of the car and the stove.

For convenience in removal, potatoes are sometimes loaded with bulkheads at the center of the car so as to leave an open space at the doorway. Whether or not this provision is made, will largely depend upon the desires of your customers.

### How to Load for Refrigeration or Ventilation

To secure the most out of a refrigerator car, it is necessary so to place the load that no interference will be had with the free circulation of cold air within the car and so that the load will assist this circulation as much as possible. To this end, not only is it necessary that the load be placed with rows running lengthwise of the car so as to provide channels for the cold air to flow away from the ice bunkers, but inspection should be made in each car to see that the cold air as it leaves the ice is not obstructed in flowing to the space beneath the floor racks or beneath the load.

Floor racks are installed in a car so that the cold air may flow quickly and unobstructedly to the center of the car, there displacing the air which is rising and passing over and through the load of produce. It will be seen that the only way in which the warm produce in the center of the car is cooled is by this circulation from the ends of the car. The more freely the air currents are allowed to flow beneath the load, the more rapid is the circulation, and hence the more rapid is the cooling.

### How to Load Sacks for Refrigeration

In loading sacks for refrigeration or ventilation, it has been found advisable to load them differently than for winter loading. The best results have been obtained by leaning the sacks against the sides of the car, leaving an air channel beneath the outside sacks along the floor and wall of the car. Sacks are laid crosswise on the tops of these sacks and thus other air channels are made, running from the bunkers toward the center of the car.

### How to Load for Winter Shipments

For shipments during cold weather, it is desirable to have the body of your load as compact as possible. The less surface exposed, the better.

For this reason, boxes and crates should not be spaced, but should be loaded close together, with all of the space between the outside of the pile and the car wall. Sacks should be laid on their sides, leaving a space between the load and the walls.

### How to Distribute Heat in a Car

In protecting shipments against cold, it must be remembered that the most severe freezing damage takes place along the floor of the car; furthermore, that in heating a refrigerator car, a portable oil or charcoal heater is placed above the ice grates in the ends of the car.

It will be seen that quite effective heating can be accomplished above the heater, but in order to place the heat on the floor of the car, special precautions must be taken to draw the cold air from the floor so that it may be replaced by the heated air which will come from the upper portion of the car and must necessarily be drawn down beneath the floor racks near the doors. There must be free circulation of air both above and below the load.

With these fundamentals in mind, the following methods of loading should be observed:

1. Place every load on floor racks that provide ample air channels running lengthwise of the car
2. Place paper beneath the load on the floor racks so as to cause the cold air to be drawn from the center of the car
3. Be careful that this paper does not cover the floor racks between the bracing nor block the opening between the floor rack and the base of the bunker
4. Allow liberal space between the packages on the floor adjacent to the bunker so that an opening is provided



5. Cover the face of the bunker with paper or other material so as to cause the heater to draw all of its cold air off from the floor beneath the floor racks, but not so as to prevent the emission of heat from the top of the bunker out over the load

6. Make sure that the car is tight about the doors and hatches. The use of paper is valuable when placed so that it prevents or directs air currents (See Figure 6 and Figure 7.)

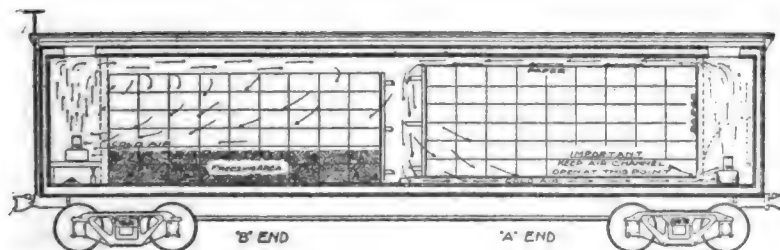


FIGURE 6. LOADING TO PROTECT AGAINST FREEZING

The load should be placed as shown at the "A" end of the car, so that there will be a circulation of warm air. Without circulation, those products on the bottom of the car will freeze as in "B" end

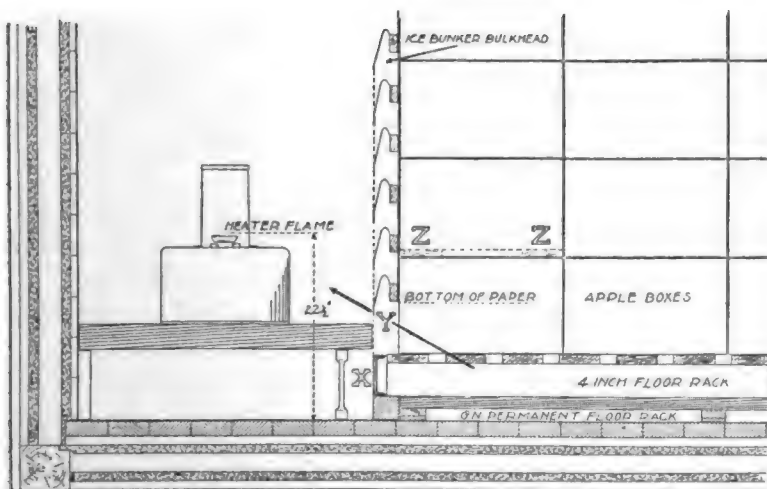


FIGURE 7. HOW TO PLACE THE HEATER

The heater is placed in the ice bunker and provision must be made to allow for air circulation. The arrows indicate the points where circulation must be insured by adequate openings

### How Inspection in Transit Prevents Loss

Where agents are maintained at various points over the country, your interests will be protected to have them inspect cars of fruit or vegetables of doubtful carrying quality. In case the condition is found to be such that added time in transit will cause serious deterioration and loss, disposition can be made of the car in a manner that may prevent a total loss.

### The Messenger

Where shipments are made in box cars and the shipper has chosen to furnish his own protection against freezing, cars should be accompanied by messengers to light and extinguish heaters. A cross-country shipment is a hardship for a messenger, since he will get a very limited amount of sleep and his meals will be very irregular. Often, when stopping at division points where he might have the opportunity to eat, all his time will be taken in looking after the heaters in the cars in his care.

For these reasons, it is very important that conscientious and trustworthy men are selected for messengers, otherwise they might get slack during the latter end of the trip, resulting in disaster to the shipment.

One messenger will take care of 10 to 12 cars, but, when possible, it is desirable to send messengers out in pairs, as they can often assist each other in times in emergency.

### Inspection at Terminals

It is very important that you have adequate inspection at terminals to protect yourself in handling claims, as well as in your trading relations with the buyers. Often an inspection may be secured from an authorized inspector of the United States Department of Agriculture.

## PART III

### HOW TO PROTECT YOUR TRANSPORTATION RIGHTS

Any one of the following is sufficient cause for a claim against a railroad:

1. Overcharge for services
2. Loss through wreck or fire

3. Damage due to the negligence of the carrier. Negligence may have been due to faulty icing, improper protection against freezing, delay in transit, faulty cars, or from other causes. If the carrier has performed all of its duties in a regular manner and your goods spoil in transit, it is doubtful if you have a just claim.

It is very difficult for the shipper or receiver to determine in just what respect the carrier has been negligent, unless the shipment has encountered undue delay. Consequently, when a shipment arrives in a damaged condition, it is common practice to file a claim for the loss due to such condition and place the burden of proof upon the carrier that there was no negligence.

#### What Claim Records to Keep

In order that you may have the proper records on which to base a claim should your shipment become damaged in transit, it is necessary to start the file of records before the damage occurs. Otherwise, the rush of the busy season may cause you to overlook a number of important things that will be difficult to get together after the shipping season. In keeping this record, certain printed forms will be helpful.

### What Claim Should Contain

Your file for claim collection should contain the following:

1. Copy of the car order
2. Time of delivery of empty car
3. Copy of bill of lading
4. Report on inspection at time of shipment
5. Report on inspection at time of arrival
6. Copy of invoice showing value of goods
7. Copy of account sales, if any, showing value of goods as received
8. Records showing allowances under sales price due to damaged condition of goods
9. Record of diversion orders
10. Supplementary records showing time on which demurrage may be charged, ice used on track, transit storage charges and switching charges

### File Claim Promptly

While it is not necessary to file claim at once, it is always good practice to file it just as promptly as the necessary data by which you may determine the amount of your claim, comes to hand. It often requires a long time to get settlement.

### Where to File a Claim

The claim proper should be filed with your local agent, unless you have definite proof that damage occurred on a connecting line. It is not probable that settlement will come through the local agent, but it is to him that you present your claim, supported by your invoice, inspection records, account sales, and other records that give evidence as to your loss.

### The Claim Adjustment

Needless to say, your files must contain copies of all records that you turn over in support of your claim. In claims over which there is any doubt as to the liability of the carrier, it will be necessary for you to consider the claim with a claim adjuster of the railroad serving you. If your claims aggregate large amounts, it will possibly devolve upon you to call upon the claim department of the railroad. Such a call should be arranged for when the chief claim agent advises you that his investigations have progressed so that he is ready to negotiate a settlement with you.

It is not often necessary to bring action against a railroad for the settlement of a legitimate claim, but in every settlement, your success will depend upon the degree of firmness that you use and in the ability that you display in presenting your case.

Adjustment companies who make a business of settling claims are now becoming evident in all parts of the country. They work upon a percentage of the amount collected, and unless you are well equipped to handle your own claim work, it is quite possible that you will save yourself many dollars by making use of such traffic firms.

### SECURING ADEQUATE RAILROAD SERVICE

Every railroad has a traffic department to look after new patrons and the satisfaction of their old shippers. Your railroad, undoubtedly, has a general agent who will call upon your request and assist you in securing the service that you think you are entitled to.

It should be understood by all shippers that the local agent belongs to the operating department of a railroad, and it is the purpose of this

department to transport the goods tendered to it in the most economical manner possible. Some of the methods of the operating department do not at all times measure up to the service that the public is entitled to, and it sometimes occurs that this department is lax in its dealings with the public. But the traffic department is maintained to see that the public is satisfied, and, for the most part, your troubles should be taken to this department.

If you desire a site for a warehouse on the railroad's right-of-way, the traffic department is the proper place to make application for a lease.

### How to Secure an Adequate Car Supply

In these days of severe car shortages, it stands the shipper well in hand to take precautions for future car supplies. Your shipping district, therefore, should see that your railroad is informed as to the probable tonnage to be shipped, well in advance of the shipping season.

Since many railroads have placed their refrigerator cars in a national pool which is administered by the American Railroad Association, it is advisable to see that this body, which has its headquarters in Chicago, is also informed of your needs.

Some districts of the Pacific Coast have found it advisable to keep a representative at the executive headquarters of their railroad, of the American Railroad Association, and also in a position to call upon the Service Bureau of the Interstate Commerce Commission in Washington, D. C., during their active shipping season.

Such a representative not only sees that his railroad executives and the officers of the American Railroad Association are doing everything in their power to get cars for his district, but also brings the needs of his district before the traffic executives of the connecting lines who may share in the business.

### How to Secure Traffic Concessions

The first step to secure lower freight rates or traffic concessions is to consider the subject with the traffic department of your railroad, showing exactly what your needs are and why you think the industry is entitled to the concessions, or better yet, why it is good business for the railroad to make the concessions.

Failing in this, the matter may be called to the attention of the chairman of the freight bureau of the district in which you are located. It is quite likely that this organization will not give you greater attention than is accorded you by your carrier.

The next source of relief is the Interstate Commerce Commission. This requires the filing of a formal complaint, whereupon the Commission will grant a hearing before themselves or their examiners. This procedure requires that you employ an attorney experienced in interstate commerce practice, and to do this, you should group yourself with others interested in the same case. A traffic association of shippers in your territory forms the logical group to carry on such work.

### How to Organize a Traffic Association

A traffic association of shippers, with a paid secretary or manager experienced in traffic matters, is a good investment for any fruit or vegetable shipping district. Such an association can handle all of the traffic matters such as freight rates, car supply, train schedules, discriminatory tariffs, and can even collect claims for its members. There are many general matters affecting the welfare of an industry, not entirely of a traffic nature, such as state grading rules, labor, and publicity, that can very well be handled by a traffic association.

You can organize such an association in your district by interesting the various shippers in its possibilities.

Funds for the support of the organization may be raised by having each shipper pay a certain amount per car or by each agreeing to deduct a certain amount per package from the sale of the grower's produce, since fundamentally, transportation is the grower's problem.

In the Wenatchee District of Washington, a combination of the two is used, the shipper pays a certain amount per car for the benefits that he receives from the association, and he agrees to be responsible for the deduction of a certain amount for each package that he handles. In this manner, this association raises an annual amount of about \$25,000 to look after the welfare of the industry.

### National Shippers' Organizations

There are national trade organizations of shippers that safeguard the interests of shippers in traffic matters, keeping representatives in Washington, D. C. to follow closely the work of the Interstate Commerce Commission and Congress. No sooner do the railroads file a new tariff that is related to the fruit and vegetable industries than these organizations analyze it and instruct their members about the action.

If any movement is started that is detrimental or discriminating against these interests, these organizations fight it from start to finish with the best legal talent to be found. It is to your interest to join one or more of these organizations to keep informed, as well as to get the service on all phases of the work.



The more important of these organizations are:

American Fruit & Vegetable Shippers Association

139 North Clark Street, Chicago, Illinois

International Apple Shippers Association

522 Mercantile Building, Rochester, New York

National League of Commission Merchants

Munsey Building, Washington, D. C.

Western Fruit Jobbers

127 N. Dearborn St., Chicago, Illinois

## PART IV

### OCEAN TRANSPORTATION

This subject will be dealt with only briefly, since most of the information will be secured in the lessons on foreign trade.

The ocean shipment will require your booking space in advance of your shipment, and this can best be done through a reliable forwarding agency, although it is entirely within your capacity to reserve the space direct from the shipping company if you find the company that will have a sailing and available space about the time that you wish to make your shipment. The charges of such forwarding companies do not usually amount to much, as they are paid a brokerage by the shipping companies.

#### How to Pack for Export

Ocean shipment involves additional handling of your goods, and thus requires that your packages have additional strength. Barrels should have adequate "liners" well nailed in place. Boxes should be strapped or wired at each end, the strap or wire to be placed close up to the cleat. Boxes having a bulge should not have strapping or wiring placed over the bulge.

Highly perishable fruits require refrigeration on board ship. However, with the exception of the early varieties, very nearly all of the apples exported from Atlantic ports move under common stowage (without refrigeration). Exportations to Europe from the Pacific Coast via the Panama Canal require refrigeration, and when so shipped, a temperature of 32 degrees should be requested.

The inland B/L is exchanged for an ocean B/L, at which time it is necessary for you to make arrangements for the payment of the inland freight charges. If the shipping company requires the prepayment of ocean freight, you will also have to take care of this before the shipment can go forward.

It is always a good policy to allow the railroads ample time to deliver before the sailing date of a ship, because they often deviate from their schedules and it places the shipper in a bad predicament if the goods do not arrive until after the ship has sailed.

#### Free Storage at the Dock

Some ports give the shipper 30 days free storage on their docks when the goods are moving in export trade, with moderate rates of storage after this time. In some seaports, the docks are owned by the railroads and shipping companies and no dock charges are made. In other ports, the docks are municipally owned and a charge may be made.

In Atlantic ports, so much of the loading is done from lighters that the B/L should bear the notation: "For export — Lighterage Free." In this case, no dock or other port charges are made. If the name of the ship is known at the time of shipment the notation should read: "For Export on the SS. \_\_\_\_\_. Sailing (date) \_\_\_\_\_ — Lighterage Free."

In addition to the handling of the contract with the shipping company, it is necessary for your ship-

ment to be cleared through United States Customs. This requires your declaring the value of the goods on special forms issued by the government, but does not require the payment of any form of duty. All of this work can best be left to the care of a forwarding company, as such a company is very familiar with all of the details and the charge, if any, will be inconsequential.

The collection of loss and damage claims against a shipping company has not had its procedure developed to the same extent as has claim work between shippers of fruits and vegetables and rail carriers. Unless the shipping company has keen competition and desires your good will, it is probable that you will not get much satisfaction in presenting your claims unless you bring legal action against the company.

Insurance takes care of the loss in case of shipwreck or damage from the seas, and it is to your interest to see that every shipment is protected by some reliable insurance company.

Some insurance companies have issued policies against deterioration of fruit in ocean transit. On account of severe losses that the insurance companies have met with on certain shipments to Great Britain, they are not anxious to write this type of insurance and have raised their premiums to the point that practically makes it prohibitive.

### HOW TO GET THE MONEY

A lot of money is tied up while farm products are in the process of being marketed. Not many producers or middlemen have enough capital of their own to finance their marketing operations. They depend therefore, upon banks to supply the money.

How can a banking connection be made that will be adequate for the business you conduct?

How can you secure the proper rate of credit to enable you to handle as much produce as you would like?

How can you secure money for products before they arrive at terminal markets?

These and "one thousand and one" other questions on financing are dealt with in the lessons that follow.

Financing is one of the biggest subjects in marketing. In fact, it is one of the biggest subjects in any business. Almost every business has had some unsatisfactory experience in financing, and in most cases, this could have been avoided if the proprietor of the business had known the principles on which credit is based.

The lessons in this course treat the subject specifically from the standpoint of marketing. Nevertheless, they provide a liberal education in financing for anyone interested in any business.

## GLOSSARY OF MARKETING TERMS USED IN THIS LESSON

bunker, n. As used in this lesson, a compartment in the end of a refrigerator car into which ice is placed.

bunker bulkhead, A partition between the ice bunker of a refrigerator car and the space allowed for loading goods.

carrier's protective service, Service performed by carriers through which perishable goods are protected while in transit for which the shipper pays a specific charge, the carrier assuming the liability of damage. Examples are: Refrigerator service and heating service. See also, "shipper's protective service."

claim, n. As used in this lesson, a demand upon a transportation company for reimbursement due to some loss.

common car service, Service of railroads in supplying ordinary box cars for shipments; as differentiated from refrigerator car service, ventilator car service, and heater car service.

consignee, n. The one to whom goods are consigned or shipped. The one who ships the goods is the consignor.

delivery order, An order issued by a shipper instructing the railroad company to release a shipment of goods to the consignee upon the payment of freight.

demurrage, n. The remuneration charged by railroads or boat lines for the detention of a car or vessel beyond the free time allowed for loading or unloading, or for reconsignment.

direct shipment, A shipment that has been paid for, or one that the shipper wishes delivered immediately to the consignee without any collection being made against him other than the freight charges.

diversion order, An order issued to the railroad company requesting a shipment to be reshipped to some destination other than its original destination.

floor racks. Slatted racks placed on the floors of refrigerator cars, providing air channels running lengthwise of the car beneath the load.

foreign line. A line of railroad other than the one over which a shipment is originally made.

four-three pack. A method of arranging packages in a car, wherein four packages are alternated with three packages in the layers and stacks.

half tank icing. The filling of an ice bunker in a refrigerator car only one-half full.

hamper, n. A light, tall basket used especially for packing such light vegetables as lettuce, parsley, beans, and so on. A hamper is round, and is smaller at the bottom than at the top. It has been made in many different sizes, but the Federal Department of Agriculture has recommended that it be made in only five sizes, containing 8 quarts, 16 quarts, 32 quarts, and 48 quarts; two styles to be made, each containing 48 quarts, one larger at the bottom than the other.

hatch, n. A door on the top of a refrigerator car used for ventilating and for closing the opening through which ice is placed in the bunkers.

ice plug. A thick insulated door that is placed into the opening through which ice is admitted into the bunker of a refrigerator car, and which is used in addition to the hatch or door. The purpose of the plug is to prevent the cold from escaping through the hatch way.

indorse, v. To enter your name on a document. An indorsement usually makes the indorser responsible for carrying out the conditions of the document.

lighter, n. A barge or flat boat commonly used for loading and unloading ships.

liner, n. A small strip of wood nailed in place against the staves of a barrel on the outer surface of the barrel head so as to hold the strips better in the groove.

manifest, n. 1. A statement issued for custom officials by the master of a vessel in which all of the information required by these officials regarding the cargo of the ship is supplied; usually the varieties, grades, and sizes of fruits and vegetables are given as well as the character of the package.

2. A list of the articles contained in a car, usually tacked inside the car by the shipper. It serves the consignee in checking the contents of the car.

open billing. The consigning of a shipment without specifying the exact route to be followed. In other words, it is left to the railroad company to select the route.

open shipment. The same as direct shipment, which see.

order bill of lading. A form of bill of lading preferred for banking purposes. Usually handled by the shipper's bank which sends it, accompanied by draft, to a correspondent bank at point of destination, which bank surrenders the bill of lading to consignee upon payment of draft. An order bill of lading must be presented to the railroad company before the goods it represents will be released to the consignee.

passing report. A report made by some employee of the railroad indicating the location of a shipment in transit.

Perishable Protective Tariff No. 1. A uniform tariff covering rules, regulations and rates on specialized services such as refrigeration, ventilation and heating, for the protection of perishables in transit on all railroads in the United States.

respiration, n. The process of breathing. The respiration of fruits or vegetables embodies the taking in of oxygen from the surrounding air through the skin, its combination with the cell contents (oxidization) and the throwing off of the products of oxidization, mostly carbon dioxide gas.

roller, n. A car in transit. The term usually implies that the car has not been sold and that the shipper is endeavoring to sell the goods while in transit.

shipper's protective service. An arrangement with a railroad company whereby the shipper assumes all liability from losses from freezing not due to carrier's negligence. The railroad company provides free transportation for a messenger to accompany the shipment for the purpose of protecting it; the

opposite of carrier's protective service in which the railroad company assumes the liability of loss. spot, v. To place a car at a particular point for loading or unloading.

standard ventilation. An arrangement in which the carrier agrees to have ventilators closed on ventilated cars when the outside temperature falls below 32 degrees, and to have the ventilators open when the outside temperature rises above 32 degrees.

straight bill of lading. A bill of lading which is not the exclusive order of the shipper to the carrier for the delivery of goods to consignee. In lieu of the bill of lading itself a written or telegraphic delivery order may be used by the shipper to release the shipment to the consignee when this form of bill of lading is used (see "order bill of lading").

strip (a car), v. To place strips of wood across a car in such a manner as to hold the packages in place. Stripping a car usually contemplates the provision of spaces between packages for free air circulation during the summer months and for holding packages together in a solid body for protection against cold during the winter.

traffic manager. An official who supervises the shipping and routing of merchandise.

tramp car. A car that is consigned to a fictitious destination with the purpose of diverting the car to its ultimate destination.

waybill, n. A document prepared for each car of goods (either c.l. or l.c.l.) by the railroad company from the bills of lading showing names of the shippers, consignees, quantity of goods, rate, instructions covering protection, and all charges carried against the shipments by the carrier. The waybill accompanies the car in the hands of the railroad employees and from its information the freight bill is tendered at its destination.







# Financing the Fruit and Vegetable Industry

BY CHARLES J. BRAND



MARKETING FRUITS AND VEGETABLES

LESSON 6

Confidential Edition  
Issued for Members

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The American Institute of Agriculture  
CHICAGO



### HOW TO STUDY THIS LESSON

While bankers want to be of the utmost service to all customers, the necessity of dealing with so many people has prevented many bankers from explaining the details of credit methods to all of their customers. Consequently, there are many in the marketing field who are handicapping themselves with inadequate financing because they do not understand the methods that are available to them.

The plans described in this lesson are all practical and in actual use. They may be used in any section, and any up-to-date banker, whose capital is sufficient will, undoubtedly, be glad to carry out his part of any of these plans.

#### The Financing Needs of the Industry

Before going into the detailed methods of financing, it is important to understand the needs of the industry, and this is adequately set forth in Part I. Do not slight this part, and do not start to study Part II until you are sure that you have a clear picture in your mind of the financial needs of the fruit and vegetable industry. With Part I mastered, you will then be able to understand much better the practical use that can be made of the various credit plans described in Part II.

By all means, talk with your local banker after you feel that you have mastered this lesson. If fruits and vegetables are shipped from your station, you will probably find that one or more of the plans described in Part II are actually in use there, and you can get some specific instances that will fix these plans in your mind much better than could be done in any other way.

If fruits and vegetables are not shipped from your station, you still can get help from your banker because similar credit plans are used for

other purposes. It would be a good idea to have a copy of this lesson in your pocket when you call at the bank, but it would, perhaps, be better not to refer to it unless you need to. Your banker will be favorably impressed if you talk with him in an intelligent way about these various financing plans, and he may ask where you learned about financing. When he sees that you are making a real effort to learn, he will probably volunteer to help you whenever you need help in the future. The average customer doesn't talk things over enough with his banker. That is why few men get as much service from the bank as they should.

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# **FINANCING THE FRUIT AND VEGETABLE INDUSTRY**

**By CHARLES J. BRAND \***

The financing of the fruit and vegetable industry involves many variable factors. These factors vary with the crop, with the section of the country, with the seasons, with the type of enterprise or enterprisers' need of financing, and with many other facts and conditions.

## **PART I**

### **THE FINANCING NEEDS OF THE INDUSTRY**

The cash and credit problems of fruit and vegetable growers and distributors fall into two principal parts.

1. Credit from the time the work of growing a crop begins until money from its sale is at hand to pay the loans

2. Funds for merchants and middlemen from the time they begin to make advances to growers for production purposes or for products shipped, until the money paid for goods by consumers is finally received

Financing requires both cash and credit. In some cases, individuals, partnerships, corporate, or cooperative enterprises, are able to provide from their own resources funds necessary to conduct all growing and marketing operations.

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\*Formerly Vice-President and General Manager of the American Fruit Growers, Incorporated; for complete statement of his experience, see Lesson I.



Fortunate indeed, and few, are the producing and marketing organizations that have funds to carry on their operations without outside financial help.

Individuals, loan companies, commercial credit institutions, and others that provide facilities for financing serve a very important purpose and, although they are middlemen in the usual inclusive sense of that word, they are, nevertheless, indispensable factors and, as such, are entitled to compensation for the use of their cash and credit facilities.

The necessity for credit arises largely from the fact that the planting and harvesting periods are far apart. Furthermore, harvest is often more or less distant in point of time or from actual consumption. Someone must supply the money to pay for labor and other costs during the time between planting and final consumption. This financing requires much larger sums than most of us realize.

#### What Operations Need to Be Financed

Usually the individual producer has sufficient funds to provide a part of the cost of growing and marketing crops.

Labor costs of plowing, harrowing, seeding, care, and harvesting of crops, are naturally the most important in point of expense. In those cases where the operation is a small one and the producer is compelled to hire but little, his credit needs during this period are small.

Where large scale production is the rule and intensively grown products are produced, the operating costs during this stage may be very high. For instance, in the case of such crops as celery and cantaloupes (the latter in the Imperial Valley of California, the former in the vegetable section

around Sanford, Florida), the cost may amount to as high as \$100 to \$200 per acre, and sometimes to even more.

### What Supplies Need to Be Financed

Fruit and vegetable growers, in common with other agricultural producers, require two kinds of credit for purchasing supplies. Supplies of the more permanent character, such as tools, implements, drainage, and irrigation systems, cost much and their use is for a long period. Consequently, loans for these supplies are usually made for longer periods than loans for seed, fertilizer, and so on. Seed, fertilizers, chemicals for protection against insect and fungus pests, marketing supplies such as boxes, barrels, crates, sacks, paper, nails and labels, require the use of shorter time credit facilities. However, in the aggregate, huge sums are necessary for these purposes.

### The Time Element in Financing

Usually, short term credit for the purchase of marketing supplies, the financing of harvesting and shipping, and for the payment of freight and other transportation costs, is more readily obtained than is credit for longer time use. The working out of this situation is evidenced by the establishment by the federal government of the Farm Loan Board to care for the long time needs of agriculture, particularly for the purchase of farms and for the construction of buildings.

Ordinary commercial credit institutions, either through the direct provision of credit to growers or through the indirect provision of credit through distributing merchants, have largely taken care of the needs for immediate marketing purposes.

This has left the medium length loans relatively unprovided for. They apply to the crops that require one, two, three, or even four years to bring to maturity. These intermediate credits are not taken care of adequately either by present commercial banking facilities or by farm mortgage loan institutions. The diversity of requirement in financing fruit and vegetable crops can best be illustrated by reference to a few specific cases.

At this time (January, 1923) Congress is considering, and likely to pass, legislation to provide more adequately for intermediate term credit. Two bills are under consideration, the bill of Senator Capper of Kansas having passed the Senate and the bill sponsored by Representative Sydney Anderson of Minnesota and Senator Lenroot of Wisconsin is being debated in the House.

It seems likely that a combination of the two bills will be made and that the final legislation will provide discounts and advances for suitable periods of time on the basis of agricultural and live stock paper, the discount agency to have ample capital and to be authorized to issue standard bonds or debentures on such paper. These bonds or debentures will be available for purchase by investors everywhere in the United States and even abroad, and their national and standardized character will give great confidence to them.

Such a system of intermediate credit, when established, should benefit particularly those sections of the country which are remote from centers of loanable capital.

#### How to Finance Annual Crops

Annual crops produce their fruit and are ready for market, generally speaking, in six months or less from the time of planting. The season of the year depends almost wholly upon the geographical

location of the producing area. California cantaloupes and Florida potatoes are planted as early as February. The potatoes are ready for market in April and May, and the cantaloupes in June.

Money advanced for production and distribution expense is released by sale of the product to consumers, generally speaking within three to five months from the time of planting.

In some sections, these crops require intensive soil preparation, temporary or permanent irrigation or drainage structures, and other things that involve cost through a more extended period of time.

#### How to Finance Perennial Crops

In contrast, perennial crops, particularly the majority of the fruit crops, require from a few to many years from the time of planting until they come into bearing.

Citrus fruits, for instance, produce no crops worthy of mention until about seven years of age. The different varieties of apples require from 7 to 12 years, varying of course, with the variety and the section of the country. Peaches require, generally speaking, three to four years before they bear crops sufficient to pay even the cost of operation for the first year's bearing.

Throughout these extended periods, the owner must either provide from his own means or through his credit, the financial resources necessary to bring the crops to the point of production.

In the case of both citrus fruits and apples, the proceeds of labor frequently are not available when the fruit has been brought to consumable condition. In the case of both oranges and lemons, it may be necessary by reason of marketing or

transportation conditions to retain the fruit on the trees for periods of weeks or even months before remunerative sale is possible.

In the case of apples, the harvesting period of the winter varieties usually extends from mid-September to mid-November, varying with the variety and the section of the country, while consumption of the stored product extends through until the following June, necessitating the tying up of capital through a period of nearly eight or nine months.

#### How Growers Can Finance Themselves

Practices with reference to methods of financing vary greatly. The actual production of apples in the northwestern states up to harvesting time is financed almost wholly by producers and local banks in producing sections.

On the other hand, the growing of cantaloupes in the Imperial Valley is from beginning to end financed almost completely by distributors and commission merchants. That is, the distributors lend the necessary funds to the producers.

Such financing involves large sums. As an illustration, consider an organization marketing less than 600 cars. It might at times, advance to growers prior to marketing time between \$300,000 and \$500,000. As the total early crop which requires so large a sum to finance, amounted in 1922 to over 20,000 cars, it is easily seen how large a sum is involved in financing even the early part of a single crop.

#### When Commission Men Lend to Growers

The competition of commission merchants and distributors to encourage growers to engage in production has been so keen that not only are the growers financed from the beginning of the season to its close, but in a great many instances, they are not even charged interest on the money advanced to them.

Needless to say, these growers have a relatively small stake in their operations which evidences itself in many ways and particularly in the readiness with which they desert one area of production to seek another.

The growers in this case, particularly in so far as the Imperial Valley and Turlock sections in California, Salt River Valley in Arizona, and the Rocky Ford section in Colorado, are concerned, are for the major part Japanese.

The alien land laws of California and a few other states tend further to restrict their opportunity to produce except as hired hands.

Manufacturing industries frequently are able to provide a large part of their operating capital from their own treasuries. For instance, the well known mail order house, Sears Roebuck & Company, whose business is so largely with farmers, carries, according to the financial press, a daily cash balance of about twelve million dollars. This firm is able without even a ripple in its ordinary operations, to buy three million dollars worth of goods and pay spot cash without borrowing.

#### How Other Industries Finance

The financial journals and the newspapers have recently carried a very brief statement of the Ford Motor Company's financial status showing cash in banks of one hundred fifteen million dollars out of total assets of more than four hundred million dollars. The American Telegraph and Telephone Company carries such large cash balances that it is able to finance practically all of its current operations without bank borrowing.

This desirable situation does not exist in the perishable industries with the heavy money requirements falling all at one time. Practically no firm expects to finance more than a fraction of its needs out of its own cash.

The financing of the industry can be considered by types of enterprises:

1. Individuals
2. Partnerships
3. Corporations
4. Cooperative Institutions

### How Can Money Be Secured?

To a varying extent, the same sources of permanent and borrowed capital are available to all types of enterprises. As a matter of fact, there is a considerable variation in the degree to which these different sources of capital are called upon.

### The Financing of Individuals

Individuals, whether engaged in production, shipping, receiving, or marketing, depend more largely upon their own resources than any other type of enterprise. These are supplemented by mortgage loans for permanent improvements on the farm, crop liens, open account credit at the banks (plain notes), collateral loans secured both by notes and securities, joint account arrangements, advances on the sale of products for future delivery, and in other ways. These methods are discussed in detail in Part II of this lesson.

Money provided by individual growers themselves is usually set aside from year to year. It may be placed on deposit in the bank at a low rate of interest. It may be invested in certificates of deposit usually at somewhat higher rates, or in short time notes, or in various forms of accommodation loans, conditioned upon the money being available when it is needed particularly for crop movement and marketing.

Shippers and smaller marketing agencies, whether individual, partnership, or corporate in character, utilize the same sources and methods.

### The Financing of Partnerships

There is no fundamental difference between the financing of partners and the financing of individuals. Generally speaking, combined resources through the formation of partnerships add to the volume of business, thus increasing its earning capacity and its supervisory powers, and hence enabling it to borrow more freely in larger sums or at lower rates of interest.

### The Financing of Corporations

All of the ways of financing open to individuals and partnerships are, in a general way at least, open to corporations. Corporations have one additional means of financing that is of the greatest value which neither individuals, partnerships, nor cooperative associations can utilize to so great an extent.

Financing by Selling Securities—This is through the sale of the securities of the corporation, either in the form of preferred or common stock or in the form of short time notes or bonds of longer maturity. A corporation with a net worth of \$100,000 will frequently borrow to the extent of \$200,000 or \$300,000.

A corporation having a net worth of one million dollars may borrow through the various ways open to it, a million more. Generally speaking, only a fraction of the permanent funds received by sale of stock or by sale of bonds and notes is used for current operational purposes.

It is the theory and general practice with respect to permanent financing that the money obtained therefrom shall be invested to a large extent in fixed assets, such as: property, packing houses, warehouses, or refrigerator cars.

A large corporation handling, say 25,000 cars of fruits and vegetables a year, may well need to borrow



at the peak of its operations as much as two million dollars. This sum provides for its current capital needs and also for placing in storage such products as are commonly stored in quantities sufficient to supply its trade throughout the season of non-production.

Banks prefer, and oftentimes require, that all loans shall be paid once a year. That is, the concern must, at least once a year, have a period when it has no money at all borrowed from the bank. The seasonal relationships of the perishable crops are such that this requirement is difficult for fruit and vegetable distributing firms to comply with. The peak loads for different crops fall in many months during the year so that, while the average peak load for all crops generally occurs in the autumn when the movement into storage is heaviest, financing requirements are heavy during other months of the year as well.

#### When Money Is Needed Most

Southern potato growers usually require the most money in April. The maximum of loans to cantaloupe growers in the Imperial Valley falls in May and sometimes in June, depending on the earliness or lateness of the marketing season. Apples, potatoes, onions, and cabbage, which are stored so heavily, occasion the heaviest credit burden in November or December. There is no season during the year when banking accommodation is not necessary.

The most effective way to meet the requirements of the banks in this matter would be to provide, preferably from the sale of stock either common or preferred, the average amount required at the time of year when the bank loans of the corporation are lowest, and then to depend on bank loans merely for additional needs. Such a treatment of the problem would be highly satisfactory to the banks and they would be

quite willing, where other conditions are satisfactory, to finance a corporation in such a position.

### Financing of Cooperative Associations

Very generally, cooperative associations are under-financed, both as to permanent and as to operating capital. Those that require packing houses and similar permanent facilities usually sell stock in a manner similar to any corporation. I have in mind a cooperative organization, which in 1921, handled \$682,000 worth of its members' products with a capital of \$10,000.

This capital was wrongly used to support auction markets maintained at certain shipping points. If prices were unsatisfactory, the association itself "bid in" the product, and consigned it to a commission man, even though buyers were willing to pay more than the "bid in" price. The result of this operation was to maintain a stable market at a satisfactorily high level, considering prices in the consuming centers. However, the consigned cars occasioned a loss of \$11,000 or \$1,000 in excess of the association's total net worth. What was lost in the way of capital was more than regained from the support given the prices at the public sale. Such a procedure as this, nevertheless, is unsound and should not be indulged in by a cooperative association. In cases of this kind, operating funds and not capital funds should be used.

A business enterprise handling so large a volume of products must have more adequate operating capital.

### Securing Money from Members

A second method of providing a limited amount of capital frequently utilized by cooperative associations, is from the sale of memberships. Legally,

members who pay an admission fee and annual fees or dues have a different status than those who obtain membership through the purchase of stock. The funds raised in both ways are treated the same by nearly all associations.

Cooperative associations have open to them, practically all the means of borrowing that are discussed in this lecture, providing their credit standing at home or at outside banks is of the character to make them good credit risks. Associations like the California Fruit Growers Exchange, the Eastern Shore of Virginia Produce Exchange, and the American Cranberry Exchange, find no difficulty in obtaining from a few thousand to a few hundred thousand dollars in loans upon their notes, signed by the directors of the organizations.

## PART II

### HOW TO SECURE LOANS

#### Borrowing on Plain Notes

This method of borrowing is utilized by all who borrow. Arrangements are usually of two or three kinds.

Individuals commonly borrow on separate notes covering each loan transaction. The grower or shipper goes to his own bank, or such bank as he may feel will be likely to extend him assistance, and after explaining the circumstances to the loaning officer, is advised that he may or may not secure a loan.

In the event he is successful, a note for a specific amount, frequently including the interest, is drawn in favor of himself or the bank, as may be preferred. If the former, it is indorsed as well as signed by the drawer and placed in the hands of the

bank, the amount called for being credited to his account or handed to him in cash, as may have been arranged.

If the amount of the loan requested is large, many banks do not permit individual officers to promise the loan but require that it be submitted to a loan committee, which is sometimes composed solely of officers of the bank and sometimes of officers and directors. The financial statement and other facts relating to the borrower are presented to the committee in as great detail as possible, and the committee determines whether or not the loan will be made.

#### Borrowing on "Line of Credit"

Many individuals and most firms make annual arrangements with their banks or have continuing arrangements for a specific "line of credit." Individual producers or shippers operating on a small scale may have arrangements for borrowing only a few thousand dollars. Larger operators frequently have arrangements enabling them without separate negotiations as to individual loans to secure advances of \$10,000 to \$500,000.

Line of credit transactions are protected by notes, usually not for the total amount granted under such credit arrangements, but for such amount as the borrower may require from time to time.

Small lines of credit, as in the case of borrowing simply on notes, are extended by individual banking officials; larger credit lines are passed on by the highest officers or by committees of bank officers or directors. Once a line of credit has been arranged, all that is necessary is to draw a note and receive credit for the amount of its face.

The discount on such notes may be deducted from principal sum of the loan, or may be paid by check at the time of the making of the deposit to the bor-

rower's credit, or may be charged to his account, or may be paid at the end of the period, according to the arrangements made.

### Time Limit of Loans

There is the widest diversity in the length of time for which loans run. The usual periods are 30, 60, 90, and 120 days. In some cases, they may run for six months. They are sometimes subject to renewal or to additional loan periods which call for the execution of new notes. It may be said that the difficulty out of which the need for intermediate term credit for the agricultural industry arises comes chiefly from the fact that numerous agricultural operations require loans for a period greater than is permitted under the Federal Reserve Act for short term loans.

### What Can a Grower Do to Get the Lowest Rate of Interest

This is an ever present question. The farmer who has no difficulty in securing loans at a low rate of interest is always envied by his less fortunate neighbor, who is inclined to think he is just as good a farmer and just as much entitled to generous credit arrangements.

There is no specific answer to the question as to how to get the lowest rate of interest, but in general, it may be said that the grower who has a reputation for producing high class, well-graded, well-packed products that can be marketed advantageously will find relatively small difficulty in securing loans. In addition to being a successful producer, his business methods should be such as to command the respect of his bank. Needless to say, he should maintain a banking account and keep in touch and maintain pleasant relations with his banker throughout the year, whose advice he can well secure from time to time on many matters.

Other things being equal, the farmer who keeps a simple and intelligent set of accounts so that he can disclose his real asset and liability position to his banker is regarded as a better risk than one who cannot do this.

### Financing by Means of Drafts

Market agencies, shippers, and growers with good credit standing, not uncommonly are able to finance themselves, in part, by arranging with their banks to accept their drafts—usually with bill of lading attached—as cash. This practice is more common in the case of shippers and marketers than in the case of producers, who as frequently as possible sell their goods on f.o.b. basis which entitles them to immediate cash, a method that will be discussed in another paragraph. The "float," that is, the amount represented by check and drafts outstanding but not yet presented at the bank, is counted on by all market agencies to help with their current needs.

### How to Discount Drafts

Drafts deposited as cash are usually discounted for the period that must elapse from the time the client has the proceeds of the draft deposited to his credit until the proceeds arising from the sale of the goods are collected in the distant market and become available to the bank extending the credit. It is a common practice to discount such drafts at a certain rate to cover both the interest and the service rendered.

Transactions that have been described in general terms can be sufficiently illustrated by a single example in slightly more detail. Assume a shipper has arrangements with his bank to accept his drafts, the proceeds to be deposited as immediate cash. Suppose the sale is made in Los Angeles and that the car is a car of oranges originating at Riverside. The shipper's representative at Riverside as soon as

the car is loaded, obtains the bill of lading from the railroad and forwards it to his principal in Los Angeles. The car has been sold to a firm, let us say, in New York. The shipper, who is the principal, draws a draft, attaches it to the bill of lading received from the agent at Riverside, and sends it with his other deposits to his bank in Los Angeles. In some cases, shippers have similar arrangements with banks at local shipping points. In such a case, the agent at Riverside would draw a draft and attach it to the bill of lading and deposit it in a Riverside bank. Inasmuch as the car will be en route from 12 to 18 days, the shipper receives the use of the bank's funds for that period, plus the time required to return the proceeds to California.

When growers sell on "f.o.b. shipping point" terms, they are entitled to receive payment for their products as soon as they are loaded and bill of lading has been delivered by the carrier. In such cases, payment may be made by a check, cash, or by a draft, either with or without bank guarantee.

In case a seller does not know the buyer, or is doubtful as to his being good for the amount of the purchase, he may require the buyer to have his (the buyer's) bank, telegraph to the seller's bank, advising that it will pay the sum called for in any specific transaction or in a group of transactions involving a stated total. When this exchange of telegrams or letters has been made, the guaranteeing bank becomes wholly responsible for the payment to the person making the sale.

### How to Secure Advances on Consignments

By arrangement, a grower or shipper is often given authority to draw on a commission merchant. This usually is done at the time of loading and shipping the goods, a type of arrangement made only when the grower or shipper and the merchant are known to

each other through experience or by reputation so that they feel safe in entering into such a transaction.

The commission merchant wires the shipper that he will honor a draft, or will advance a given amount per car, per package, or per hundred pounds, as the case may be, on a particular shipment or on all shipments. This authorization is usually accompanied by the advice that the amount of the advance will be withheld by the merchant from the proceeds of sale. Sometimes the total proceeds of all sales at the beginning of the season are withheld until advances have been covered.

At other times, a certain proportion is withheld from each sale, the final balance being deducted when settlement is made between the parties at the conclusion of the season. When drafts are drawn to cover advances under such conditions, they are usually payable upon presentation whether or not the bill of lading is attached and even though the shipment may not have been received.

#### Guaranteed Advances Benefit Growers

In some sections, and in the case of some crops, there is such keen competition between marketing agencies to get goods for their houses to sell that commission merchants guarantee advances; that is, they guarantee that the shipment will bring when sold, the amount of their advance to the shipper.

If the market breaks, or for any reason outside of the control of the shipper, the commodity does not bring the amount of the advance, the loss falls on the commission merchant.

During recent years, by reason of the demand for grapes for the home manufacture of beverages, the practice of guaranteeing advances has been especially prevalent in the vineyard sections of California. Fruit that, in the old days of a market restricted to



local wineries, brought as low at \$20 per ton, in recent years has occasionally brought as high as \$200 per ton, with advances guaranteed.

### Financing by Joint Account Arrangements

The joint account operation creates an equal partnership in profits and losses. However, it does not necessarily contemplate equality in the amount of value of the services or things to be furnished by each of the parties thereto.

Usually this is undertaken between the grower and a shipper, or a commission merchant, or between a shipper and a merchant, or other person having available funds that he is willing to hazard in fruit and vegetable production and marketing.

The grower provides the land, machinery, tools, teams, his own labor and supervision, and the other party furnishes money to buy seed, fertilizer, spraying chemicals, packages, and other things requiring cash outlay.

Where the arrangement is on a fifty-fifty basis, the shipper and the commission merchant may each put up half of the required funds, or some other arrangement may obtain whereby they jointly borrow the funds from banks. The shipper then does the buying, loading, and shipping, and the receiver does the selling.

While in joint account operations, other methods of dividing gains or losses are sometimes arranged, the usual practice is to divide equally. It not infrequently happens that joint account operations are a failure in a given year. It is then customary to continue the operation through another season, the first profits of that season, if any, being used to pay the deficit of the previous season.

### How to Get Advances on Future Sales

Some growers are known to produce fruits and vegetables of such desirable quality and available at such times as to be marketed advantageously.

Some shippers are known to be such good judges of quality and value and to operate in so upright a manner that merchants are anxious to do business with them. In cases of this kind, sales for future delivery are frequently made months before the crop attains maturity.

Contracting for future delivery usually begins in the case of tree fruits (particularly the deciduous kinds) as soon as the danger from the last frost is over. Shortly thereafter, buyers appear in many sections and the good growers have an opportunity to sell for delivery to the buyer when the harvesting season arrives.

#### When Advances Are Made on Crop Liens

Sometimes the crop is bought on the trees, the buyer to do the harvesting. Sometimes a nominal advance of money is made to bind the bargain. At other times, sufficient advances are made to carry the cost of production from that time forward. And in still other cases, an agreed sum per acre, per car, or per package is made payable at stated periods from the time the bargain is made until harvesting time. In a majority of cases, advances of this kind are on a per acre basis.

Advances necessarily vary greatly according to the crop. In the case of cantaloupes, it is very common to advance from \$20 to \$40 per acre in the form of what is known as an acreage advance. This distinction is made on account of the fact that other advances for specific purposes are also made, including seed, paper for covering young plants until the danger of frost is past, wraps, labels, nails for crates, and other expenses.

Further advances are made at the time of picking and loading, usually amounting to a flat rate per crate of the various sizes of crates in common use. In the case of crops that are grown very intensively,

like celery, these advances sometimes reach \$200 or even \$300 per acre.

The grower thus provides himself with money from the distributor. The distributor, in turn, does not have sufficient cash balances to conduct such extensive operations and he, too, borrows to secure the money advanced to growers and shippers.

Practically all of the sources mentioned in this lesson are open to him.

### How to Insure Advances to Growers

So great in extent has the practice of making advances to growers become in recent years that additional means of securing these loans are being devised from time to time. The most important of these is the method of insuring advances through certain of the regular insurance companies.

In the section around Sanford, Florida, where production of truck crops is carried on in a most intensive manner, marketing agencies making advances to growers insure these advances. The insurance rate rises rapidly as the amount advanced per acre increases.

For instance, if the premium rate on advances of \$100 per acre were 3%, the rate on \$200 advanced per acre might be 8%, with a definite limit fixed by the insurance company beyond which it would not insure the advances.

Marketing agencies furnish insurance companies in such cases, specific statements of exact amounts advanced, definite information concerning the marketing contract made with the grower, which usually provides that first proceeds of all sales shall be used to liquidate the insured loans. There are other similar safeguards.

It is the theory of this form of insurance that if the proceeds of the production operation do not equal

the amount advanced, the insurance company will bear the loss of the difference between the amount actually received and the amount advanced. As a result, rates are high and amounts per acre available are fixed as nearly as possible at the minimum of production.

### Advances on Marketing Contracts

Growers, growers' associations, buying brokers, and shippers of the right kind frequently find it possible to obtain funds for their operations by executing marketing contracts with the large distributing agencies or with commission merchants.

Frequently a marketing agency will include in its contract with the grower or shipper, a clause permitting shippers to draw at stated times a total maximum sum, the sum to be repaid either at some specific date or by subtraction from the proceeds of sale.

Marketing contracts of this kind naturally restrict the grower or shipper from marketing through any agency except the one providing him with funds. For this reason, such contracts are sometimes regarded as rather undesirable, preventing the use of markets that are paying better or the consignment of goods to other merchants in the same city who are, by reason of more favorable situation and better trade outlets, able to secure better prices. To be thus bound, has been regarded as particularly disadvantageous for cooperative associations, though this does not necessarily follow.

If the financial relations made are advantageous to the association, such advantage probably equals or outweighs the disadvantage of being confined to a single marketing agency.

### How to Make Warehouse Loans

In the case of products, like apples, potatoes, onions, cabbage, and certain others, it is a very

common practice to finance by means of loans secured by notes to which are attached warehouse receipts as collateral. This type of loan is regarded with favor by practically all banks. They usually do not loan more than a moderate part of the current market value of such products and thus are fully protected against loss.

The banks require insurance policies or suitable certificates of insurance where a large quantity of products in various warehouses is covered by a single policy. The insurance credentials must accompany the warehouse receipts.

Banks on occasion have declined to accept certificates of insurance under a single floater policy. They demand individual policies for each lot that is in a different warehouse. This is very disadvantageous to the owner who is able to secure far lower rates on large policies.

A floater policy may cover all of the goods in a single warehouse or in a number of warehouses in a single city, or all of the owner's goods to be protected in any warehouse wheresoever they may be located. As fire rates vary in different cities and in different warehouses, both by reason of the character of protection and the construction, there may be a separate rate for each house or the insurance company may calculate a blanket rate which is, in effect, an average of the individual rates for all houses.

It is customary under a floater to use the average closing inventory of each month as a basis for the premium. Assume that apples are in storage through a period of six months. A thousand barrels may be put in storage in October, 10,000 in November, and 10,000 more in December. There may be no withdrawals during these three months. If the rate of shipment for the following three months were the same as the rate of putting in storage for the first three months,

there would be no goods protected by the policy at the end of the six months' period. The value of the closing inventory for each of the months would be added together and divided by six to determine the average amount of property protected, and the rate would be applied to this average amount.

It is very common for shipment to begin almost immediately after goods reach storage, and hence there will be fluctuations within a month. For instance, on the 30th of November there may be in storage 20,000 barrels and on December 15 there may be 25,000 barrels. Outshipments may, by the close of December, have reduced the amount again to 20,000 barrels. Similarly, the closing inventory of the month may represent the maximum in storage. In fact, everything considered, it is frequently the case with apples that the inventory at the close of December is the highest for the year. Suppose a fire occurs during the middle of December, when there are 25,000 barrels in storage. The averaging of the rate protects this maximum as well as the average amount. Insurance companies customarily limit the total aggregate lots for which they may be responsible in any one warehouse.

Separate policies usually run for a specified length of time and the premium must be paid for the whole period. If insurance is taken for the largest amount he will have in storage during the season, the insurer pays too much throughout the period; if for some value below the maximum, there are times when he is not adequately protected.

### How to Use Trade Acceptances

This form of financing is probably utilized more commonly by corporations than by other types of enterprises, though it is open to all. Properly used, trade acceptances are available only in connection with obligations arising out of current transactions in the sale or purchase of goods.

A trade acceptance is an evidence of indebtedness (similar to a draft) drawn by a seller upon a buyer and accepted by the buyer by a formal indorsement across its face. It differs from a draft principally in the respect that the obligation has been accepted by the buyer, and thus he is obliged to pay just as much as if he had signed a note. This constitutes what is known to bankers as "two name paper," whereas the ordinary form of promissory note is "one name paper" and hence in some degree, at least, less desirable from a banking standpoint.

A trade acceptance properly drawn by the seller and accepted by the buyer is presented at the seller's bank and by it discounted and the proceeds of the sale are thus made available to the seller at once. If the seller has a line of credit arrangement with his bank, acceptances may make it necessary to use all the money the bank has agreed to supply. Some banks include acceptances, and hence deduct them from the total to be loaned under a line of credit.

Trade acceptances are never drawn on demand or at sight, but are always drawn for definite periods, usually 30, 60, 90, or 120 days, or sometimes for even six or nine months, depending upon the needs of the particular industry.

### How to Borrow from the War Finance Corporation

In April, 1918, at the height of the World War, Congress passed an Act creating the War Finance Corporation with capital stock of five hundred million dollars, all to be subscribed by the United States. Its purpose was to give help to enterprises necessary to the prosecution of the war that were unable to secure funds from regular banking institutions. Except for winding up its affairs, the original law provided that the Corporation was to cease functioning six months after the declaration of peace.

In March, 1919, Congress extended the powers of the Corporation to the making of loans for promoting export trade. In August, 1921, a further addition of powers was conferred and the life of the Corporation was extended. The new authority gave the Corporation power to make advances not only to banking institutions and exporters but also to dealers in and handlers of agricultural products, including co-operative associations. This credit facility is available for agricultural purposes to banks, bankers, trust companies, and other financial institutions, and through them to growers and dealers. It is also available directly to cooperative associations of producers. Loans extended are secured by indorsement, guarantee, pledge, or otherwise.

The commercial instruments used most generally are promissory notes and trade acceptances. Large sums have been advanced direct to cooperative associations which have, in turn, pledged their notes supported by the notes received from growers, as collateral. The same procedure is followed in the case of banks that may have discounted notes, drafts, or bills of exchange covering agricultural products.

Citrus associations of California and Florida, the apple associations of the Northwest, the almond growers of California, and a few of the truck growing associations of the Atlantic Coast region have been greatly helped by means of the War Finance Corporation's funds. The greatest utility, however, has been to other agricultural trades, particularly cotton, tobacco, wool, and live stock, both through banks, cooperative associations, cattle loan associations, and otherwise.

Unless Congress extends the life of the Corporation again, it will henceforth function only in connection with the liquidation of business entered upon prior to July 1, 1922. At this time (January, 1923) pending rural credit legislation proposes a further temporary extension of the life of the Corporation.



### Desirability of the Various Means of Financing

It is impossible to state what are the most desirable methods of financing under all circumstances. Generally speaking, the more money for its operations that an enterprise can provide from its own funds, the more advantageous its position and the higher its standing in the community, particularly in a banking sense.

On the other hand, the carrying of cash balances sufficient to handle peak loads (the largest shipments of the year) may entail a heavy interest loss on the enterprise when its needs are far below the peak.

Organizations with large cash balances either receive very small interest from their banks on their average balances or are forced into the loaning business, either through the use of the call loan facilities of the New York money market or otherwise.

The most desirable situation is for the enterprise to have an average operating capital sufficient for its average requirements, and to depend upon the banks for everything above that.

Savings are the source of all capital. Savings must naturally find their way into the banks and thus become available to commerce and industry.

The extent to which borrowing should be indulged in must be determined by the wisdom and real needs of the borrower. If he over-borrows he will no doubt get into difficulty and pull his creditors along with him.

### Who Is Entitled to Credit?

Nearly a million carloads of fruits and vegetables enter into the commerce of the United States in a year. In addition, there is an enormous volume arising from the production of the commercial and other truck crops in the neighborhood of the cities

and towns of the country. This business is so widespread, involves so great an amount of money, and is conducted by so many enterprisers working at such long range, that facilities for knowing the credit rating of all factors have proven to be indispensable.

As a result, certain agencies have brought out credit books covering practically all persons engaged in the marketing of perishable products, as well as many who are engaged in production.

Persons financing fruit and vegetable operations should be familiar with and have access to these recognized credit books which specialize in covering the produce business. Many firms can, of course, be traced through the rating books of such agencies as Bradstreet and Dun, but two books treating solely with wholesale fruits, produce, groceries, canners, millers, and hay handlers, are available. These are the Credit Book of the Produce Reporter Company and the Fruit Produce Guide published by the Fruit Produce Rating Agency of Chicago.

They show by cities and towns the names and addresses of many thousands of the shippers, growers, receivers, commission merchants, brokers, etc., of the country. They also give the nature of their business, the products in which they specialize, the annual volume of their business, the number of cars handled, and their financial worth, together with a guide to their business reputation based on the experience of those doing business with them.

Students of fruit and vegetable marketing should familiarize themselves with these credit books and their use. While not infallible, they are extraordinarily useful. They are not sold but are leased by the year and consequently, are subject to recall at the end of each annual period. They can be found in the offices of the prominent factors in the trade in most cities.

Are Credit Needs Adequately Provided For?

As is the case in practically all commercial and industrial enterprises, there are deserving individuals here and there throughout the country unable to secure the immediate financial help their current operations demand. As a result, there is a fairly widespread belief that the fruit and vegetable industry is under-financed and has extensive credit needs requiring more ample provision.

I do not believe that this is the case. Every year sees so great an increase in the quantity production of fruits and vegetables that we practically never have a season that does not witness over-production, of some crop, or in some section. In some cases, unusually favorable weather conditions, rather than extensive over-planting afford an explanation for such over-production.

On the whole, however, ease of access to sufficient money to conduct fruit and vegetable growing have in the past and will continue to cause occasional over-production and glutting of markets, with consequent disastrous results.

In California alone, there has occurred in the last three years an increase of over 100% in the planting of table and juice grapes. Florida has under bearing age almost as many citrus trees as are in bearing. The whole Gulf and South Atlantic Coast from Corpus Christi to Norfolk is increasing its vegetable plantings at such a rate that over-production has been witnessed in many sections this season. It is my belief that there is no shortage, on the whole, of sufficient credit for maintaining and advancing the fruit and vegetable industry.

### WHERE TO SELL

There are dozens of outlets for fruits and vegetables some of which are not known to many growers and market men. Information regarding all of these have been brought together and will be supplied to you in your next lesson.

In addition to describing the various outlets for fruits and vegetables, the lesson goes into detail regarding selling contracts and conditions commonly used in selling fruits and vegetables. You can readily see that this is one of the most important lessons in the course; that it contains practical facts that every successful market man must know.

## GLOSSARY OF MARKETING TERMS USED IN THIS LESSON

accommodation loan. A loan made by a man (not a banker) to some friend or business acquaintance.

advance, n. Money supplied by a buyer before goods are actually received.

alien land laws. Laws, especially those of California, forbidding unnaturalized foreign citizens to own land.

annual crop. A plant that dies down at the end of each season and must be grown from seed each year.

bid in. To make the last bid in an auction sale on goods owned by the bidder.

break (market), n. A sharp reduction of prices.

capital, n. The funds, equipment, machinery, and the like used in conducting a business.

cash, n. Current money on hand or readily available. Especially coin, government bonds, or bank notes actually in one's possession.

cash balance. The net amount of cash on hand.

cattle loan association. An association formed to loan money on live stock as collateral and for the purchase of live stock.

certificate of deposit. A document issued by a bank certifying that the one to whom it is issued has on deposit a specified sum that may be withdrawn after having given a specified notice.

certificate of insurance. A document that certifies that a certain amount of insurance protects certain property.

collateral loan. A loan secured by certain property delivered to the lender as security.

commercial credit institution. An organization formed for the purpose of making a business of lending money.

commercial instrument. Some form of note in which the maker promises to pay, for value received, a specific amount of money.

common stock, Stock in a commercial organization which usually gives its owner the right to vote; as differentiated from preferred stock which usually does not give its owner the right to vote.

credential, n. A document showing the authenticity of some claim.

credit risk, The hazard assumed when money is loaned or credit is given. A borrower or buyer may be known as a good "credit risk" when he has a reputation for paying his obligations promptly. Another may be known as a poor "credit risk" when he has a reputation for not paying his obligations promptly.

credit, n. 1. Transfer of property, especially money, on promise of future payment. 2. Reputation for solvency and prompt payment of obligations; the degree of confidence in the ability and disposition of an individual, a firm, corporation, or government, to fulfill financial obligations. 3. The amount to which a person, corporation or business house may be financially trusted in a given case.

credit standing, That part of one's reputation that has to do with the payment of obligations when due. A man with a poor credit standing is one who has a reputation for not paying his obligations promptly when due.

credit to account, To give credit for the part payment or complete payment of a bill that has been charged to one's account.

crop lien, A legal claim secured by a crop.

extend, (loan) v. To put the due date ahead; to change the due date to a later date.

face, (of a note) n. The value as expressed on the written or printed surface of a note, not including the interest.

Farm Loan Board, More properly the Federal Farm Loan Board; an agency established by the U. S. government to help provide long term credit for farmers.

fifty-fifty basis, A plan for dividing returns or expenses of an enterprise wherein each of the two parties to the agreement pays or receives an equal share.

financing, n. The process of supplying or securing the money necessary to purchase goods for re-sale, or to conduct any enterprise.

fixed asset. An article that is not used up in the course of serving an industry. For example, land, buildings, machinery, and so on, are fixed assets as compared to raw materials which are quickly used up and sold as finished products.

flat rate. A rate that is a specific amount to be charged for a specified quantity; the opposite of a rate based upon a percentage of the buying or selling price.

f.o.b. Free on board, an abbreviation used to indicate that the buyer will pay the freight, but that the seller will load the goods for transportation.

intermediate credit. Credit in which the borrower is allowed from six months to three years for repayment.

line of credit. The total amount of loans which the bank stands ready to advance to a certain customer.

liquidate, v. 1. To repay. 2. To turn into cash by selling or collecting. 3. To turn all of the assets of an enterprise into cash.

maturity, n. The time fixed in the document itself for the payment of a note or bond.

mortgage loan. An advance secured by mortgage.

net worth. The amount of wealth one possesses after all obligations have been paid. Net worth is applied either to individuals, partnerships, or organizations.

note, n. A signed promise by one party to pay another a said sum of money at a specified time, for value received.

operating capital. Money on hand which may be used for operating a business.

peak load. The point or time when the largest requirements exist; the peak load of marketing is when the largest quantities are being sent to terminal markets; the peak load of credit requirements is when the largest amount of money is needed, and so on.

perennial crop. A plant that grows from year to year without being replanted.

plain note. A note that is not secured by collateral and one that has only one signature.

preferred stock. Part of the capital stock of a company which does not give its owner the right to vote on the management policies, but which does contain a pledge of the company to pay the owner a specific amount of dividends before dividends are paid on common stock.

premium rate (insurance). A per cent of the insured value of property which is demanded by an insurance company in payment for assuming the risks specified in the insurance policy.

promissory note. Same as "note," which see.

rating book. A book in which the credit ratings of individuals and business organizations are printed.

short term credit. Credit extending not more than six months.

short time note. A note that falls due in six months or less.

single floater policy. One insurance policy that covers several different lots of goods in specified locations or in any location.

stable market. A market during a time when fluctuations of prices are small.

trade acceptance. A draft, the obligation of which has been accepted by the one upon whom it is drawn. This acceptance is indicated by an indorsement across the face of the document.

two name paper. Notes or other evidences of indebtedness signed by two persons.

under-financed. adj. A condition in which an enterprise is not provided with enough money and credit to conduct the business properly.

War Finance Corporation. An organization formed by an act of Congress in April, 1918, for the purpose of giving help to enterprises necessary to the prosecution of the World War, that were unable to secure funds from regular banking institutions.

warehouse loan. A loan secured by goods stored in a warehouse, a warehouse receipt for the goods, usually serving as the collateral.







# Where To Sell and How

BY R. E. HANLEY



MARKETING FRUITS and VEGETABLES  
LESSON 7

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Issued for Members

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The American Institute of Agriculture  
CHICAGO



**THE MAN WHO CONDUCTS THIS LESSON**

**R. E. HANLEY**

As Chicago sales manager for The American Fruit Growers, Inc., Mr. Hanley sells thousands of car-loads of fruits and vegetables every year. He has daily dealings with all classes of terminal market buyers. Consequently, he looks at the subject treated in this lesson from a practical standpoint.

The American Fruit Growers, Inc., serves fruit and vegetable growers in all parts of the United States as a market representative.

Previous to his present connection, Mr. Hanley held the same position with the Federated Fruit and Vegetable Growers, the big national cooperative selling agency.

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**HOW TO STUDY THIS LESSON**

The perishability of fruits and vegetables makes it necessary to decide quickly where the sale will be made. Consequently, it is important that you should be familiar with all available outlets where sales may be made.

This lesson not only gives a comprehensive list of the various outlets for these crops, but also shows how reliable purchasers or agents may be found and how their services may be utilized to the best advantage.

It is not sufficient that you have a lesson of this sort for reference. You should familiarize yourself so thoroughly with various outlets that you will not need to refer to a lesson in deciding where to sell. You will be well repaid for close application to the study of this lesson.

By all means, take every opportunity presented for talking with any of the handlers of fruits and vegetables mentioned here. Get in touch with local buyers and, if possible, you should confer with some agency that handles these products at terminal markets.

As an exercise to fix in your mind the various outlets, make from memory, after you have finished studying your lesson, a list of the types of buyers to whom these crops may be sold, together with the location of each. Also, make brief entries indicating how you might get in touch with each buyer.

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## WHERE TO SELL AND HOW

BY R. E. HANLEY

It is probably true to say that the shipper of fruits and vegetables has a greater variety of outlets to choose from in seeking a market, than has a producer of any other agricultural product.

The outlets and channels of trade for other agricultural products are more limited and definite. Thus, most live stock passes through the stock yards; most of the grain passes through the grain exchanges. But with fruits and vegetables, there is an almost endless number of outlets including:

### OUTLETS FOR FRUITS AND VEGETABLES

Local Buyers	:	Traveling Buyers	:	Central Market
	:		:	Buyers
1. Consumers	:	1. Individual buyers	:	1. Car-lot
	:		:	wholesalers or
	:		:	car-lot
	:		:	receivers
2. Country	:	2. Wholesaler's	:	2. Operators
merchants	:	representatives	:	3. Brokers
3. Car-lot	:		:	4. Commission
assemblers	:		:	merchants
4. Cash buyers	:		:	5. Auctions
	:		:	6. Private
	:		:	sales
	:		:	exchanges

### WHAT DETERMINES THE CHOICE OF AN OUTLET

Which outlet should you choose? What are the conditions which influence the selection of one agency instead of another? What are the dangers and precautions to be watched for with each?

This lesson answers these questions. Obviously, each specific case must be considered by itself after a careful consideration of all the local factors and conditions.

The instruction which follows is of equal interest to individual shippers and to sales managers of cooperative associations, for the outlets for both are much the same. A cooperative association is merely a group of producers handling their marketing through a joint manager. The manager must, to a large extent, employ the same outlets as the individual grower, unless the association is so large that it can employ its own selling force.

In selecting a market outlet, a shipper must first decide how much risk he is willing to assume. The nearer he takes his products to the distant consumer, the greater will be the risk which he must assume. There is freight to be paid, and the risk of loss and deterioration increases day by day.

#### Who Shall Assume Marketing Risks?

Between the grower and the consumer are many agencies commonly called "middlemen," ready to assume the marketing risks. If the producer wishes to avoid these risks and free himself from all the worries of marketing, these agencies stand ready to lift the burden from his shoulders. The grower must be satisfied to let these middlemen make a profit, or else must be willing to take the marketing risks the middlemen assume. If he takes the risks, the farmer may reap additional profits, but he is more likely to suffer a loss than the middleman, who has far more experience in the technique of marketing. That is one reason why most farmers sell to middlemen.

The amount of risk he is willing to assume will largely determine which outlet the producer will choose. He can go as far toward the ultimate consumer as he chooses, but in each case he must assume additional risk and must perform added services for himself.



### How Shippers Are Classified

Fruit and vegetable shippers are divided into two main classes, l.c.l. (less than car-lot), and c.l. (car-lot) shippers.

L.c.l. shippers are much more limited as to outlets than c.l. shippers. In fact, about their only outlets are to car-lot assemblers, or shipment to nearby markets on consignment. Consignment shipping will be discussed more fully in this lesson.

The great bulk of the fruit and vegetable crop is shipped in car-lot quantities. Consequently, most of this lesson is confined to a discussion of the various channels open to those who ship in car-lot quantities.

### Few Growers Can Do Their Own Marketing

As a general rule, individual growers should attempt to sell as near the point of production as possible, when reasonable prices are obtainable, allowing others to reap whatever speculative profits (or losses) there may be from longer shipments. Few individual growers have the necessary marketing experience, or the wide acquaintance among central market dealers to sell to advantage.

Satisfactory distribution cannot be secured by selling in only one or two markets. One of the greatest services offered by professional shippers or distributors, is their wide acquaintance with brokers, buyers, wholesalers, and receivers in a number of markets, with all of whom they have established satisfactory trading arrangements.

It will be seen that the individual producer who must spend most of the year on production work, out of touch with market conditions and developments, will be materially handicapped, if he attempts to compete with professional buyers and shippers who travel from section to section and specialize on marketing. However, this does not mean that individual shippers cannot employ trained men to

supervise their collective marketing work. There are several private marketing exchanges whose services are available to individual shippers or associations. Then there is the plan of cooperative shipment.

### One Market Not Enough

As stated previously, if a shipper expects to distribute fruits and vegetables in car-lot quantities, it is almost essential that he keep in touch with conditions in several markets. This is advisable because, while he may have absolute confidence in the integrity of his market representative in some one market, it is only reasonable that this dealer will be prejudiced in favor of his own market, and it will be well to check up his quotations with those in other cities.

### LOCAL OUTLETS

A number of growers, all producing the same commodity, and all living in the same section have a marked advantage over the isolated grower who is not near any other producer of the same commodity. Frequently, when there is a sufficient tonnage available, wholesale buyers will send representatives to buy shipments at the loading point. If enough of these buyers can be attracted, the competition between them will insure a very satisfactory local market for producers. Most growers like this way of selling because practically all speculation is removed for them and they know just what they are going to get before they sell.

Even if the buyers are not in the habit of visiting a certain section, or if it is felt that local buyers are not paying a fair market price, it is often possible to attract competing buyers to the local market. The growers may do this by advertising in the trade journals which are read by wholesale buyers, or by writing to representative wholesalers, telling them the volume which is available,

general quality, and the time that the shipments will start. This publicity work should be done well in advance of the season, so that the buyers can make arrangements to have representatives on hand when the shipping season opens. It is best done by a group of farmers whose products total enough to make it worth sending local buyers to the territory.

#### Little Chance for Selling Direct

There is no question but that theoretically, it would be advisable if every consumer could secure all of his food supplies direct from the producer without the assistance of any middlemen. However, in practice, it would be just as logical to handle all government through the national capital at Washington, eliminating all other governmental bodies such as the state, county, township, city, and village governments.

It would be equally inefficient to have all army orders come directly from general headquarters to each individual private, eliminating all army divisions and subordinate officers. Gradual subdivision is essential in government, in the army, in the manufacturing, and in the distribution of farm products.

Nothing that is said here should be construed to mean that there is not a place for direct marketing. Parcel post shipments and public markets are used with success by a few growers. However, the great bulk of the agricultural crops can never be marketed in this manner and as we are more concerned with methods that can be used widely, only passing mention will be given to this subject.

Losses from Direct Sales—The difficulties in the way of selling direct to the consumer are many. There is the difficulty of locating customers, making collections, avoiding bad debts, and so on. The amount received on any one sale may seem large, but the profit on one sale may be more than offset by the losses on others.

Incidentally, it may be stated that most producers ask a price equal to prevailing retail prices. No large volume of trade can be built up unless some saving in price is offered. Consumers prefer to buy from convenient retail stores unless they can buy cheaper elsewhere. Producers should be willing to sell at approximately the price paid by the retailer for his stocks. This will leave the producer a fair profit and will offer a real inducement to consumers. The producer gets the profit that would otherwise be made by the wholesaler; and the consumer makes a saving equal to the profit of the retailer.

Roadside Selling—The methods of direct marketing include the following: Roadside markets, direct delivery by wagon or motor truck, public markets, express, and parcel post.

Roadside markets are becoming of increasing importance around large cities because of automobile travel, and much produce is sold in this way. However, this outlet is somewhat limited, but very popular in certain sections of the country.

Direct delivery by wagon or motor truck to customers is limited to a comparatively small territory near to the producer. This outlet is perhaps more important for milk and dairy products, than for fruits and vegetables. Few producers can spare the time from farm duties to make retail deliveries of fruits and vegetables.

Public Market Selling—Public markets are maintained in many cities under municipal supervision, where farmers can drive in with their produce and sell either to consumer or to retailers. In many cities, public markets have been a distinct success, while in others with equally good facilities, the markets have not been well patronized, either by growers or consumers. In this method of marketing too, the time taken from other farm duties, may be more than can be spared. During the war special efforts were put forth to develop this plan of merchandising.

Parcel Post Sales—While considerable quantities of farm products are shipped by parcel post, the volume of farm business handled has not come up to the expectations of those who urged the extension of parcel post facilities to relieve marketing troubles. The difficulties of finding customers, lack of refrigeration facilities in transit, breakage and spoilage, and irregularity of orders, all have served to cut down the volume of business handled through the mails.

There is no question but that there is a real field for these more or less direct sales, where growers are favorably located, or where there is a small quantity of selected produce to be sold. But the great bulk of farm products will probably never reach market through these channels.

### Selling to Country Buyers

The "middlemen" through whom growers of fruits and vegetables may sell, naturally group into three divisions:

1. Resident local country buyers
2. Traveling buyers or brokers
3. Marketing agencies located at market centers

As stated previously, the outlet chosen will largely be determined by the willingness of the grower to assume the marketing risk and to perform marketing services for himself.

The first group, resident local country buyers, includes the following:

- A. Country merchants
- B. Car-lot assemblers
- C. Cash buyers such as car-lot shippers or distributors

Country Retail Merchants—Country merchants are not as important factors in distributing farm products as they formerly were. The country merchant has

confined his purchases of farm products largely to poultry, eggs, farm butter, and cotton. The produce he buys is usually taken in as credit for supplies sold to growers, although in many cases, cash is paid. Usually, country merchants sell to car-lot assemblers, or ship on consignment, although some may handle enough produce to ship in full cars themselves.

**Car-lot Assemblers**—Car-lot assemblers, as their name implies, buy small quantities of produce from growers, country merchants, and others, until they have assembled enough to make up a full carload. In the produce trade, they are sometimes known as country collecting agents, and they often go from farm to farm with their wagons or trucks, collecting eggs and poultry.

While in most cases, car-lot assemblers act independently and buy and sell for their own account, they may at times act as agent for the grower, handling produce for his account for a specified fee or per cent. Car-lot assemblers perform a real service, in that they bring together the small shipments of a large number of growers, combining them into quantities which can be shipped economically to wholesalers.

**Cash Buyers**—Cash buyers are local country buyers of special products and are known in some sections as country shippers, car-lot shippers, or car-lot distributors. Except for one difference, they might for convenience be merged with car-lot assemblers. The principal distinction is that assemblers buy in l.c.l. quantities, while cash buyers, or car-lot distributors, or shippers, buy only in full carloads, purchasing for their own account and paying cash in most cases.

Cash buyers operate mostly in districts producing large quantities of one commodity. Some of these local country buyers, such as potato warehousemen, may handle shipments for the growers' account.

### Advantages of Selling Locally

The greatest advantage of selling to any of these groups of resident local country buyers is that they are well known in the community and have a reputation to maintain, which is some assurance of fair dealing and moral responsibility. Furthermore, the grower has an opportunity to bargain for the sale of his own produce, and before it is sold, he knows what he is to receive. The transaction is closed and the money paid promptly.

### Traveling Buyers

Traveling buyers operate either on their own account or they work on a salary for wholesale firms in the large markets. They operate in essentially the same manner as do the resident country buyers, except that they are not permanently located at any one shipping point. They follow the crop movement from one section to another, starting in the south in the winter months, and gradually moving north as the later crops mature. They sometimes solicit consignments for commission firms.

### Investigate Traveling Buyers

It is difficult, in every case, to check up carefully on the financial standing and business ethics of these traveling buyers, and growers will do well to sell to them only for cash, unless they know definitely the responsibility of the man with whom they are dealing. This statement must not be construed to mean that all traveling buyers are bad moral risks, for this method of buying has become general, and many of the largest and most reputable firms secure the bulk of their supplies in this way.

## CENTRAL MARKET OUTLETS

The third important group of outlets for shippers of fruits and vegetables includes the six marketing agencies located at the large market centers:

1. Car-lot wholesalers or receivers
2. Operators
3. Brokers
4. Commission merchants
5. Auctions
6. Private sales exchanges

It is not the purpose of this lesson to describe the operating methods of these market agencies. That is fully treated in the lesson, "Marketing Agencies in Large Markets."

Rather, the services offered by these agencies are described, and suggestions are made for establishing connections with them.

#### Car-lot Wholesalers and Operators

Car-lot wholesalers and operators can well be considered together. The essential distinction is that operators are merely large car-lot wholesalers who maintain branch houses or representatives in several markets, whereas the "car-lot wholesaler" (as used in these lessons) is a dealer operating in one market only.

As a matter of fact, many car-lot wholesalers do not confine their business entirely to buying. Many serve as commission merchants and accept goods on consignment. Similarly, the average commission merchant also buys some produce outright. But, for our purpose here, in order to avoid confusion, we will treat only the outright purchase part of the car-lot wholesaler's business.

Car-lot wholesalers buy either through their own salaried traveling representatives, through traveling brokers, or by direct correspondence with well-known shippers in whom they have confidence.

How Wholesalers Finance Growers—Very frequently, these agencies will help finance the production of the crop by means of cash advance to pay for land rental, crate materials, and other supplies



and expenses. Details and terms are, of course, arranged by contracts, which differ in each individual case.

Often these buyers will undertake to superintend the harvesting operations, including picking, grading, packing, and loading. They may even make cash advance at shipping time, and supervise the distribution of the crop.

### The Outlet Through Brokers

Another important agency located at market centers is the broker. Usually, they deal only in car-lots and merely act as an intermediary between the seller and buyer. Seldom does the broker take possession of the goods, nor does he have the authority to close the sale without confirmation from the shipper.

How Brokers Operate—The usual practice is for a shipper to quote a definite price or ask a broker to secure offers for some standardized product. The type of information needed by a broker in order that he may secure orders or offers, is explained fully later in the lesson.

The broker calls on members of the trade to secure orders or to ask them to make offers, and if any orders or worth-while bids are received, he will wire these to the shipper for acceptance or rejection. If accepted, the broker executes a written sales contract on standard or special forms on behalf of the shipper. The goods are shipped, and the broker receives his brokerage fee without further service on his part—that is, as far as consummating the sale is concerned.

In most cases, all financial transactions are conducted direct, between shipper and buyer. In the event that the car is rejected upon arrival, the broker must help to effect delivery or adjust the matter by a reduction in selling price.

**Shipment Before Sale**—With products that are not thoroughly standardized, and not well known on the market, it may be necessary for the grower to ship the car to some market in care of a broker, so that buyers can have the privilege of inspection before making an offer. The broker, in such a case, will induce prospective buyers to go to the railroad yards and inspect the car. Any offers that may be made are then referred to the owner in the same manner as already outlined.

Brokerage charges vary according to the quantity handled by the same broker for the same shipper, according to the character of the goods, and the service required. Generally, however, on straight carloads of single commodities sold to a single buyer, the brokerage charge is only \$15 to \$25 per car.

#### **How to Select a Broker**

Due to the fact that a brokerage business requires almost no equipment and very little investment, there are a great many brokers, varying as to capability, integrity, and stability. Brokers should be selected with great care. As a rule, the best way to get information regarding a broker is to consult with other shippers. The experience of shippers is likely to be the best indication of the broker's ability and honesty.

While it is true that a broker does not, as a rule, have control of the goods, but merely negotiates the sale, still there are many ways in which one broker may serve more reliably than another. While it is possible to get lists of brokers from government agencies, it is often difficult to get definite information concerning any individual broker from this source.

A broker who has been in business a long time and who has given satisfactory service to certain shippers is likely to be the safest one to use.

### Selling Through Commission Merchants

The consignment method of selling through commission merchants is probably more used by fruit and vegetable shippers than by almost any other shippers. A grower can find an outlet for almost any grade of produce by this method, although results may vary all the way from good profits to losses.

It is the general belief that the consignment method of selling is fast dying out, but it is likely that it will always be used to a greater or less extent for the sale of odd lots or by the grower in an insolated community.

It is usually the tendency among shippers to sell to the buyer who will give quickest returns, with the least amount of risk necessary on the part of the shipper. That is one reason why commission merchants are not always so popular as cash buyers.

When the shipper consigns his goods to a commission merchant, the shipper must assume all risks, in addition to the risk of the honesty and ability of the commission man. If sale is made through a broker, the risk is less. If the sale is made to a local cash buyer, there are no risks at all, the transaction is completed at once, and if payment is made in cash, or with a certified check, or with a check on a local bank that may be cashed immediately, practically all risk is eliminated.

What Commission Firms Charge—Under this method, goods are shipped to some commission firm. The commission merchant has control of the goods and disposes of them at the best price obtainable. The commission merchant retains a definite percentage of the sale price as his commission. This charge ranges from 5% to 15%, depending upon the size of the shipment and the commodity handled, the average running from about 7% to 10% on large quantities.

It will be noted that the rate is considerably higher than that charged by brokers. This is due to two reasons. First, smaller lots are handled and more service is rendered. Very frequently, commission merchants render account sales within 24 hours, assuming full risk of collecting the purchase price from the jobbers or retailers who purchased the goods. Furthermore, the merchant usually pays the transportation charges upon receipt of shipment, as well as drayage expense. These charges are, of course, deducted, together with the commission, before returns are made to the shipper.

Before shipments are made on consignments, a definite agreement should be reached as to charges, and full information of intended shipments should be given to the merchant so that he can plan to handle the shipment when it arrives.

Many merchants furnish stencils marked with the firm's address and with an identification number for the shipper. This is done where shipments are being made regularly.

### Selling Through Auctions

Very little will be said of the auction method of selling at this point because an entire lesson is devoted to this important subject. Very few auction companies accept direct shipments from growers. They prefer to have someone representing the shipper at the sale. Consequently, few individual shippers use the auctions, unless they happen to be in the carlot shipping business on a large scale.

The auctions are used most commonly by large cooperative shipping organizations, operators, and exchanges. This is partly due to the fact that the most satisfactory results at auction, are secured from the sale of standardized and well-known products and brands, and very few individual shippers have a sufficient volume to have established a widespread reputation for their particular brands.

One factor which has worked against a more general use of the auction, has been the tendency to utilize this method of sale in disposing of fruits and vegetables which could not be disposed of to advantage at private sale. Such products are sometimes "dumped" upon the auction because they are in such condition that re-shipment is impossible, and because they have to be disposed of without delay.

### Private Sales Exchanges

An important sales outlet is offered by the private sales exchanges or national distributors. They maintain an organized sales force throughout the country which may be used by individual growers or cooperative associations not in a position to maintain their own sales organization, and who wish to secure the advantages of wide distribution.

The American Fruit Growers, Inc., distributors of the "Blue Goose" brand of fruits and vegetables, is one of the biggest of such exchanges.

The private sales exchange, by handling the distribution of the crops for many shippers variously located can keep its sales force busy the entire 12 months of the year. The exchange maintains salaried representatives in the most important markets and operates through bonded brokers at many other car-lot markets.

Help In Shipping—Salaried representatives, known as field sales managers, are often sent to the shipping point to take charge of shipment during the crop movement for associations or big growers. These representatives at shipping points keep in communication with the various market sales representatives by telephone and telegraph, and effect car-lot sales prior to or at time of shipment, while en route or after arrival at destination.

The exchange operates on a broad scale and its profits do not depend upon the number of cars handled in one market, but rather upon the total volume of

business sold by it throughout the country. The greatest advantage of such a service is the broad distribution resulting and consequent avoidance of market gluts or congestion.

Some exchanges operate their own producing properties and sell their own products along with those of their clients. However, it is difficult to arrive at any definite conclusion as to whether this has any important effect upon prices secured for their clients.

How an Exchange Sells—The exchange sells practically subject to the grower's orders, but generally the exchange is vested with authority to exercise its judgment in the matter of sales prices, terms of collection, and so on. Charges vary according to volume and character of service required. Some contracts call for a percentage of the sale price similar to the commission of a commission merchant, and others, a stipulated brokerage per car.

### TERMS OF SALE

Turning now from a consideration of the possible outlets to the terms of sale, we find again three broad classifications:

1. Sales at point of origin
2. Sales in transit
3. Sales at destination

#### Sales at Point of Origin

Sales at point of origin can be divided into three divisions:

- A. Outright sale, or sales on contract, before or at harvest
- B. F. o. b. sales or quotations
- C. Delivered sales or quotations

Outright Sale—The first type of sales at point of origin, namely "outright sale or sales on contract before or at harvest," is more prevalent

in some sections than in others, largely because of custom. These sales may be made under a number of different conditions

In many orchard sections, buyers pay a lump price for all of the fruit of an orchard while it is still on the trees, the buyer agreeing to pick, pack, and load. In other cases, a lump price may be paid for all of the fruit, but with the understanding that the grower will pick and pack.

Other sales may include only certain grades from the orchard, the grower retaining the privilege of selling the remaining grades as he desires. Frequently, local packers will buy all of the fruit from an orchard, on the basis of so much per container for each grade, the final returns to be delayed until the entire crop has been packed, and the number of containers of each grade have been definitely determined.

#### Sales on Contract, Before or At Harvest—

In sections where the canning business has been developed on a commercial scale, many growers enter into a contract to grow a certain acreage of specified varieties for the canning plant. Frequently, the canning plant will furnish selected seed, and even advance money before the crop is harvested.

Sales to Canning Factories—The increase in number of by-product plants has been rapid in the last few years. Whereas formerly, they used largely culls and surplus products, they now form an important sales outlet for the best grades in many sections. By-product factories include canning, plants, pickling plants, cider mills, evaporating and drying plants, juice factories, and so on.

Frequently, a contract between grower and by-product plant will specify the exact price to be paid for the commodities upon delivery. In other cases, the price to be paid is specified as "the prevailing market price on the day of delivery."

This latter plan has obvious disadvantages, especially where it happens that so little trading is done on the open market that it is difficult to know just what the prevailing market price is.

By-product plants make it commercially practical to ship only the best grades to market. There is a growing realization on the part of shippers that it does not pay to ship everything that is produced in the orchard or field. The apple growers of the Northwest learned this lesson early and only their best grades go to market--the rest being utilized in by-product plants or as feed.

The realization of this important merchandising principle is one of the factors that has made it possible for the growers of the Northwest to compete on eastern markets, in the face of the heavy freight which their products must bear.

While outright sales or sales on contract before harvest are desirable from many points of view, they are not so important or so common as the second principal division of sales at points of origin; namely, "f. o. b. sales or quotations."

#### F. O. B. Sales or Quotations

According to the Standard Rules and Definitions of Trade Terms for the Fruit and Vegetable Industry, (see supplement), "f. o. b. sales or quotations means that the commodity quoted or sold is to be placed free on board the car, or at ship side at shipping point, in suitable shipping condition, and that the buyer assumes all risks of damage in transit not caused by the shipper whether there is a bill of lading to the order of shipper or not.

"C. a. f. sales (cost and freight) are the same as f. o. b. sales except that the selling price includes the correct transportation charges to destination.

"C. i. f. sales (cost, insurance, and freight) are the same as f. o. b. sales, except that the sell-



ing price includes insurance and the correct freight charges to destination."

While the Standard Definitions, as well as usage, consider f. o. b. as meaning "free on board point of origin," rather than as "delivered free on board at destination," it is always safer to specify the loading point, as f. o. b. Jacksonville, and so on.

F. o. b. sales are to a large extent made to traveling buyers who inspect and accept the products in cars at shipping point and arrange payment therefor by cash or agreed terms. In this respect, f. o. b. sales resemble "track sales" in the large markets. Most shippers, growers, dealers, or cooperative associations sell by telegraph, telephone, or mail to car-lot purchasers directly or through brokers or their own agents.

Privilege of Inspection—Trade custom accords a buyer the privilege of inspection at destination, when goods are not examined by him at point of origin, or this privilege is waived specifically, which is done at times.

Federal and state inspection service now made available in a few important producing districts has greatly facilitated f. o. b. trading. This service, which is impartial and official, is thoroughly explained in Lesson 3 of this course. It is procurable at approximately \$4 per car and \$2.50 for smaller lots. The certificate of inspection issued by these inspectors is accepted as prima facie evidence in court.

In general, there are two types of f.o.b. sales.

- a. F.o.b. usual terms
- b. F.o.b. cash track

Sales F.O.B. Usual Terms—The usual procedure in a sale f.o.b. usual terms is somewhat as follows:

In response to quotations sent out by the shipper, customarily made subject to prior sale and seller's

confirmation, an interested buyer, directly or through shippers agent or broker, will wire acceptance, giving specifications and shipping directions such as date of shipment, routing, and point of delivery. If the shipper is convinced of the honesty and responsibility of the buyer, he will wire confirmation, giving the car number and initials, the number and variety of packages, date shipped, routing, and so on.

The bill of lading with sight draft attached is mailed to a city bank in the city where the buyer is located. Frequently, the local bank will advance to the shipper up to three-fourths of the value of the shipment, and get repayment through collection of the draft that accompanied the bill of lading.

Upon arrival of the car at destination, the buyer has the right to inspect the car before finally accepting it.

If he decides to accept the car, he must pay the draft before he can secure the bill of lading.

Sales f.o.b. usual terms favor the buyer, for he does not have to pay for the shipment until he has had a chance to inspect it.

Sales F. O. B. Cash Track—Sales f.o.b. cash track favor the shipper, for he gets his money before the car moves, and is relieved of all damage claims and danger of rejection upon arrival at market. Usually, buyers will purchase on this basis only on an unusually strong market where buying competition is keen. This term means that the buyer pays cash before the car moves, either through his traveling representative on the ground, or by remittance by mail or telegraph.

Sometimes the buyer deposits money at the shipper's bank payable upon shipment.

In other cases, the buyer may have his own bank guarantee credit to a certain amount subject to draft upon shipment. This is known by the term, "shipping point acceptance bank guarantee."

### Advantages and Disadvantages of F. O. B.

**Sales**—The principal advantage of f.o.b. sales from the shipper's standpoint is that the buyer assumes all of the risk, inasmuch as the shipment belongs to the buyer as soon as delivery is made to the carrier. On the other hand, many shippers claim that f. o. b. sales mean no more than destination sales because the buyer, in practically every case, reserves the right of inspection and acceptance at destination. At any rate, those who favor f. o. b. sales answer that at least there is a prospective buyer in sight who really wants to buy goods of this description, and at least the shipper is not sending out his products blindly.

They also contend that even if the shipment is rejected on a falling market, the buyer usually is willing to accept an allowance or compromise which will net the shipper more than the actual prevailing market price. In other words, the buyer will accept shipment at a price somewhere between the original contract price and the prevailing lower market price.

Another objection raised against f. o. b. sales is that poor distribution results, inasmuch as the buyers must distribute their purchases without knowing what the other buyers are doing, and gluts are likely to occur. However, this is equally as likely to happen with shippers unless they happen to ship through a central agency or representative, as for example, a cooperative shipping association.

### Delivered Sales or Quotations

The third division of sales at point of origin is "delivered sales or quotations." This is defined in the "Standard Rules and Definitions" as follows:

"Delivered sales or quotations mean that the commodity quoted or sold is to be delivered by the seller on board the car, or on deck if delivered by

boat, free of any and all charges for transportation or protective service, at the market in which the buyer is located, or at such other market as agreed upon, the seller assuming all risks of damage in transit not caused by the buyer."

These sales have often been described as "f. o. b. destination," but under the standardized rules, f. o. b. is to be used only to mean "free on board at point of origin."

On this basis, the seller assumes all the risk up to the time of delivery to the buyer at destination.

### SALES IN TRANSIT

"Sales In Transit" include two divisions:

1. In transit or rolling car sales
2. Tramp car sales

The "Standard Rules and Definitions" defines these as follows:

#### Transit or Rolling Car Sales

"In Transit or rolling car sales mean that the commodity quoted has been in possession of the transportation company and under movement from shipping point prior to the day on which the quotation is made, and that the car is moving over a route in line of haul between the point of origin and the market quoted.

"Every order for a sale of commodities so contracted shall relate back to the time of issuance of the bill of lading by the transportation company, and shall have the same force and effect in every respect as if given or made prior to the issuance of such bill of lading.

"If sold f.o. b. shipping point, the buyer assumes only the lowest authorized all rail freight charges applicable between point of origin and the destination stated in the contract of purchase, together with car rental, refrigeration and heater

charges, if any; provided, that the kind and extent of the protective service required by shipper's instructions to the carriers are specified in the contract.

"But the buyer shall not assume any demurrage, storage, detention, icing or heating charges, or diversion or reconsigning charges, that would not have accrued had the car been originally shipped direct to the destination provided in the contract of purchase.

"If the carrier fails to accomplish diversion when properly notified, and such notification is duly acknowledged by the carrier, the contract of sale shall become null and void unless otherwise specifically provided. Either party of the contract shall immediately notify the other of any knowledge or belief that carrier had failed to make the diversion.

"The seller shall specify, when quoting or offering to sell, the date and place of district of shipment, type of car in which was loaded, character and extent of protective service instructed, and, if possible, the approximate location of the car.

### Tramp Car Sales

"Tramp Car Sales means that the commodity quoted has left the shipping point under a bill of lading issued prior to the day on which the quotation is made, and has moved or is moving over a route out of line of haul with the market quoted. The rules applying to In Transit or Rolling Cars shall also apply to Tramp Cars except as to definition of the term."

When there is a surplus of shipments above the local demand of buyers at shipping points, it is not always possible to wait for buyers or to put goods into storage in anticipation of higher prices. Frequently, this surplus must be moved to market to

be sold at whatever price it will bring. This is especially true of highly perishable commodities.

In such a situation the cars are started in the general direction of the consuming territory in the hope that offers will be secured from some market before the cars reach the first diverting point. The usual method is to bill the cars with shipper's order, giving as destination the nearest diversion point. Upon arrival, diversion orders are given.

"In transit sales" are usually made only by associations rather than by individual growers, and are used only in order to prevent large supplies from piling up in one market or at shipping point. The shipper assumes all the risk and, if a buyer has not been found by the time the market is reached, the shipment must either be sold on consignment at auction or placed in storage.

At times, a shipper may give his market representative the power to sell to the best advantage, or he may authorize him to sell "subject to confirmation."

### SALES AT DESTINATION

The third general classification of sales is "sales at destination." This includes:

1. On track sales
2. Consignment sales
3. Sales through auction
4. Sales out of storage

#### On Track Sales

Only one of these needs further explanation here.

The first division of sales at destination, "track sales," is defined as follows in the "Standard Rules and Definitions:"

"Track sales. When a commodity is sold on track after arrival at destination, the buyer shall

be considered to have waived any right to reject the commodity so purchased upon receipt by him or his duly authorized representative, from the seller or his duly authorized representative, of the bill of lading, delivery order, or other document enabling him to get the goods from the carrier.

"The foregoing shall not be construed as depriving the buyer of a right to reparation when the unloading of the car shall demonstrate that a part of the lading which was not accessible to inspection; was of a quality or condition much inferior to that portion which was accessible to inspection; but any such claim for reparation must be made within 24 hours after receipt of delivery order or bill of lading.

"To avoid delay, telegraphic orders to deliver cars sold on track should be sent to the carrier and the buyer should be so advised by wire. Where a bank holds the bill of lading, the buyer should be notified that instructions have been sent to the bank.

"When wiring an order to deliver a car sold on track, it is advisable to have the telegram repeated so as to be sure that it has been received and that there have been no errors in transmission."

Under this method, the broker usually gets buyers to inspect the car and make offers, which are then transmitted to shippers.

#### **WHEN IS A SALE A SALE**

In quoting prices, there are so many possibilities of misunderstanding that the "Standard Rules and Definitions" includes the following as Rule 20:

"A quotation of price given by the seller to the buyer is not an offer to sell, but only an invitation for an order or offer to buy, even though the party quoting actually owns or has the goods and makes the quotation in person. The sale or contract

of sale is not completed until the seller or his authorized agent has accepted the order. After acceptance of an order, neither party has the right to cancel without the consent of the other party.

"To avoid misunderstanding, it is essential that the language used in quoting prices or making offers be unequivocal. It is suggested that

- "1. When a seller desires to solicit orders by quoting prices, he use the words 'we quote' and that
- "2. When he intends to make a definite offer to sell, he use the words 'we will sell.'
- "3. When quoting, selling, or buying, the words 'Standard Terms' should be included in the wire to indicate that the transaction is subject to these Standard Rules and Definitions of Trade Terms.

It is unnecessary, when quoting prices, as distinguished from offering to sell, to give notice that 'all quotations are subject to changes in market price and to the goods being unsold on receipt of order' or 'subject to confirmation,' but the practice is recommended, because it helps to make clear to prospective buyers that the quotations are not offers to sell but only invitations for offers to buy.

"It should be borne in mind at all times that if the party to whom an offer is made does not accept it exactly as made to him, there is no contract and his modified acceptance amounts only to a counter offer.

"It should also be borne in mind that to complete a contract, a definite offer to buy or sell must be accepted within a reasonable time."

In order to sell to the best advantage, free use must be made of telephone and telegraph, and the mistake should not be made of attempting to economize on words if the meaning is not clear. When compared with the value of a car of fruits or vegetables, the



cost of several telegrams is insignificant, especially when the various reduced rate services are utilized such as night and day letters, telegraphic codes, and so on. Courtesy demands the prepayment of all telegrams unless replying to specific requests for information.

### Information Necessary in Making Sales

In offering shipments for sale, sufficient information must be given, including such items as the following:

1. Probable date of shipment
2. Shipping point
3. Commodity
4. Number of packages
5. Kind and size of packages
6. Quantity and grade of each variety

Where sufficient information is given, a broker can often sell a "roller" before arrival.

### Confirm Order

When an offer has been accepted and shipment actually made, the acceptance should be telegraphed, together with the car number and initial, whether freight or express, and route. Also, the bill of lading should be forwarded immediately by mail, and this should be mentioned in the telegram.

### Investigate Financial Responsibility

Shipments should not be made blindly to some market representative whose business and financial responsibility have not been investigated. There are a number of sources of information from which the commercial rating of market representatives can be secured.

The Produce Reporter's "Blue Book" published by The Produce Reporter Company, 190 N. State St., Chicago, Illinois, and the "Guide Book" published by the Fruit Produce Rating Agency, 136 W. Lake St., Chicago, Illinois, show the credit and financial

standing, and volume of business in cars for brokers, shippers, and wholesale buyers and receivers.

Local bankers can be of assistance in looking up financial responsibility of market representatives. The market representatives of the Bureau of Agricultural Economics of the United States Department of Agriculture, or the directors of the state bureaus of markets are usually in a position to render definite assistance.

Once a grower has established satisfactory marketing connections, he should plan to place as much of his business as possible through these concerns, for in this way both shipper and market representatives learn to know what is wanted and a basis of confidence and respect is created.

#### Terms of Sale Should be Made in Writing

Before shipping to a representative, a clear and definite understanding in writing should be reached as to charges, commissions, methods of payment, and so on. Even where two parties have the greatest mutual respect and confidence, no business transaction should be entered into without a written understanding or agreement, for even among the best of friends, misunderstandings will develop which might be avoided by a brief contract or written statement.

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#### HOW TO DEAL WITH TERMINAL MARKET MEN

Now that you are thoroughly familiar with all of the outlets for fruits and vegetables, you will want to know more regarding dealing with terminal market agencies. The next lesson treats this subject thoroughly. Each terminal market agency is discussed in detail and from a practical viewpoint.

After mastering the next lesson, you will be able to answer such questions as these:

How may a dependable broker be found?

What agency is usually most satisfactory for the selling of an ungraded carload of fruits and vegetables?

When is it preferable to sell to a commission man, and when it is better to use the services of a broker?

## GLOSSARY OF MARKETING TERMS USED IN THIS LESSON

c.a.f. sales. A transaction in which the buyer pays the freight; the initials stand for the words "cost and freight."

c.i.f. sales. Transactions in which the buyer pays insurance and freight to destination, tax included; the initials stand for "cost, insurance, and freight."

delivered sales. Transactions in which the seller must deliver the goods free of all charges for transportation or protection service on board the cars at the market specified by the buyer, or on deck, for delivery by boat; the seller assumes all risk of damage or loss in transit not caused by the buyer.

destination sales. Transactions made after the goods arrive at market or with the understanding that the seller must pay all charges for delivering the goods to the market.

f.o.b. cash track. A transaction in which the seller delivers the goods on board the cars at shipping point without expense to the buyer, but receives payment for them before the car leaves the station.

f.o.b. usual terms. Transactions in which the buyer pays the freight but reserves the right to inspect the goods before paying the draft that is sent to his bank with the bill of lading attached.

in transit sales. Sales made after the car has left the shipping point; same as "rolling car sales" and same as "tramp car sales."

on track sales. Sales made while the goods are in the car either at the shipping point or at destination; customarily, in the sale of fruits and vegetables, at destination.

operators, n. Large wholesale firms which send private buyers and solicitors into producing sections and which, through representatives or branch houses in several large markets have a wide distribution for goods which they purchase or handle on consignment.

outlet, n. As used in this lesson, a buyer or class of buyers for certain goods.

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**Note:** This is part of the Marketing Dictionary supplied with this course.

**QUESTIONS FOR FRUIT AND VEGETABLE LESSON 7**

As soon as you have mastered this lesson, answer these questions and submit your answers to The American Institute of Agriculture, Chicago, Ill., for grading or correction.

Do not fail to write your name, address, and matriculation number plainly on each set of answers you send. Be sure to give the number or letter of the lesson, and the number of each question answered. Write the question in full before writing the answer. Be brief and explicit. Confine your answer to the length indicated, if possible. Use a typewriter, if you have one.

Answer all questions. If any are omitted, the omission will count against you.

- I. Name the four classes of buyers to whom fruits and vegetables may be sold at the local shipping point.
- II. Name the two classes of traveling buyers.
- III. Name the six classes of central market buyers.
- IV. Why is it that few individual growers find it profitable to attend to all of the details of marketing their crops to central market dealers? (30 words)
- V. How do central market wholesalers sometimes finance growers? (20 words)
- VI. How do private sales exchanges sometimes help at the shipping point with the details of shipping? (30 words)
- VII. What is the principal advantage to the shipper in selling f.o.b.? (20 words)
- VIII. Who assumes the risks of shipment on delivered sales?
- IX. What is a tramp car sale? (15 words)
- X. Why should the terms of sale be put into writing? (20 words)





# **How to Use Marketing Agencies in Large Markets**

**BY C. W. KITCHEN**

# **The Auction Method of Selling**

**BY C. J. BRAND**



**MARKETING FRUITS AND VEGETABLES**

**LESSONS 8 AND 9**

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## **LESSON 8**

### **THE MAN WHO CONDUCTS THIS LESSON**

**C. W. KITCHEN**

Representing the interests of thousands of fruit and vegetable growers, C. W. Kitchen has studied the marketing facilities in all of the principal central markets of our country.

Engaged in the fruit and vegetable work of the U. S. Department of Agriculture, he had part in organizing information regarding middlemen handling these products. He has looked at the situation from the grower's standpoint and his analysis of marketing agencies and their methods of doing business will, therefore, be of unusual value.

After completing this work for the government, he was engaged to manage the public market in Washington, D. C. It is from this market that many of the residents of our national capital secure their daily supplies of these foods.

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### **HOW TO STUDY THIS LESSON**

This lesson will give you a clear understanding of the operations of the central market agencies, and when you have finished with the lesson, you will have found that you, as a shipper, can take advantage of their marketing services and greatly benefit yourself.

Study the lesson with that in mind. Avoid prejudice. If you have had a misconception of services performed by market middlemen, just lay your prejudice aside as you study. Read with an open mind. Endeavor to get the truth as presented, not by a market man, but by a practical shipper of fruits and vegetables.

## STUDY OUTLINE FOR LESSON 8

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## **HOW TO USE MARKETING AGENCIES IN LARGE MARKETS**

**BY C. W. KITCHEN**

Marketing is, after all merely a matter of purchase and sale. Buyers and sellers must come into touch with each other.

With our modern marketing system, present or prospective owners of goods need not meet personally to effect a purchase or sale. For the most part, the work of marketing and distributing fruits and vegetables is done by agents whom we call middlemen.

It is the purpose of this lesson to outline the principal classes of middlemen in the fruit and vegetable trade and to tell what functions they perform, and how they carry on their work.

Middlemen differ from each other in the kinds of fruits and vegetables they handle, in the stage of of the marketing process to which their activities are confined, in the scale of their operations, and in the way they are organized.

### **WHY MIDDLEMEN ARE NEEDED**

The United States produces about one million cars of fruits and vegetables each year which enter into commercial channels. This figure does not represent total production; it does not include immense quantities marketed direct from producer to consumer, nor does it include imports. It includes only that part of our domestic production which is handled by agents of the producer and the consumer.

The delivery of a million cars of fruits and vegetables from producer to consumer calls for organization and systematic effort.

When a farmer grows apples, stores them for a few weeks on his farm, hauls them to market in his own truck or wagon, and sells them to consumers, he performs all the labor of marketing. No division of labor is needed. The problem is simple.

But when we realize that the consumer in New York City or in the city of Washington receives most of his cantaloupes from California and Colorado, many of his apples from Washington and Oregon, nearly all of his oranges and grapefruit from California and Florida, the problem becomes complex. Division of labor is necessary. Organization is imperative.

The perishable nature of most fruits and vegetables demands speed in distribution. Special methods and equipment are required. The distribution of fruits and vegetables in our large markets is, therefore, done by experienced middlemen, performing various duties and rendering various kinds of service.

#### Principal Classes of Middlemen

In the important shipping districts are found:  
Traveling buyers representing dealers in large markets

Brokers          Resident dealers  
Farmers' cooperative associations

In the large receiving and distributing markets, such as Chicago and New York, the principal classes of middlemen in the fruit and vegetable trade are:

Car-lot wholesalers          Commission merchants

Sales representatives of large car-lot distributing organizations

**Sales representatives of farmers' cooperative marketing organizations**

<b>Brokers</b>	<b>Auction companies</b>
<b>Jobbers</b>	<b>Retailers</b>

### **Secondary Agencies**

In addition to the primary distributing agencies operating in the large markets, there are many secondary agencies or auxiliaries each playing its part in the marketing process. These include:

<b>Transportation agencies</b>	<b>Delivery services</b>
<b>Cold storage warehouse men</b>	<b>Credit services</b>
<b>Traffic services</b>	<b>Public and private inspection services</b>
<b>Market information services</b>	<b>Trade organizations</b>

### **THE BROKER**

Practically every city that receives car-lot shipments of fruits and vegetables either has a selling broker or is canvassed by a broker from some neighboring city of large size. The broker acts as the market salesman for shippers who are unable or prefer not to make sales direct to car-lot wholesalers.

### **Usefulness of Broker to Industry**

Successful fruit and vegetable brokers are usually keen, wide-awake men. It is their business to keep fully informed of market prices and conditions not only in their own markets, but in competing markets and in shipping districts from which the market in which they are interested receives its supplies.

The steady canvassing of the buying trade in the large market by the broker tends to stimulate

buying. Consequently, this results in a city absorbing larger supplies than it would without his influence. As the broker's income depends upon the number of cars he sells, he naturally is constantly endeavoring to create a market for more and more goods.

### How Speculation Can Be Avoided

Frequently a broker is charged with abusing his privilege as an agent by speculating in the goods he is instructed to sell for his client. Thus, a shipper may have a car in the market and instruct a broker to sell it for him at the best price obtainable. Future market conditions may look favorable to the broker because of his intimate knowledge of conditions and he purchases the car with his own funds and holds the shipment for a rise in price.

This action on the part of the broker prevents the shipper's goods from entering into active competition with other goods offered for sale and may result in his receiving an unjust return. The shipper in such a sale might receive returns based on the lowest market price for that day and would receive no benefit from improving market conditions or the broker's ability as a salesman. When a broker buys for his own account, he ceases to be a broker in the strict sense of the term.

Speculation in the goods of the shipper can usually be avoided by requiring direct settlement between the shipper and the market purchaser.

### Source of Supplies

As a rule, the fruit and vegetable broker deals only in car-lot shipments. He draws his supplies from:

1. Individual growers with whom he has established contact through correspondence or personal representation

2. Local cooperative shipping associations with which he may have a season's contract
3. Local merchants in the shipping districts
4. Large car-lot distributing organizations
5. He may also represent a shipper in attending to the details of selling a shipment at auction

### How a Broker Works

Under ordinary circumstances, the broker does not have control of the goods he is offering for sale. Therein is the distinction between the broker and the commission merchant. The broker, as the salesman for the shipper, must carry on all negotiations in the name of the shipper, his principal.

The broker, operating in the large city market makes most of his sales to car-lot wholesalers or jobbers. Being the salesman of the shipper, the broker should strive to represent him to the best advantage.

### Sale Must Be Confirmed by Shipper

When he has shipments to be made, he either visits personally or telephones all dealers in his market who might be interested in his offerings. When a possible customer is located, arrangements are made for him to inspect the goods offered by the broker.

After the prospective customer and the broker agree upon a price, and upon the other details of the transaction, the broker must first secure confirmation from the shipper of the proposed sale before it actually becomes a sale.

Assuming a sale of a carload of apples by a broker, he might telegraph the shipper:

"Smith offers on car GN 52076 Winesaps 2.75 Spitzenburgs three dollars delivered."

If this offer is acceptable to the shipper, he might telegraph a reply as follows:

"Confirm sale Car GN 52076 Winesaps 2.75 Spitzenburgs three dollars delivered."

If the offer was not acceptable to, the shipper might telegraph:

"Smith too low on car GN 52076 must have three dollars for Winesaps."

Several telegrams might pass between broker and shipper before the sale is made.

### Broker's Settlement

Brokers' sales are usually cash transactions, delivery and collection being accomplished simultaneously. Cars consigned to brokers for sale are usually billed to the shipper with instructions to the railroad to notify the broker named when the car arrives at destination. If the broker has sold the car before it is shipped, or while en route, the shipper will forward to a bank at destination the bill of lading and a draft for the amount to be received.

When the car arrives and is accepted, the purchaser pays the draft at the bank, secures the bill of lading, and obtains delivery of the car from the railroad company. If payment is not provided for by a draft, the broker may take the purchaser's check and forward it to the shipper, or payment may be made direct from the purchaser to the shipper.

Many shippers whose responsibility has been established with the railroad, may retain the original bill of lading temporarily and accomplish delivery at destination by a wire or written order to the freight agent, in which he is instructed to deliver the shipment to a person named in the order, and freight charges are guaranteed by the shipper.



Broker's Expenses

Some successful brokers handle thousands of cars annually. They will represent many shippers, large and small. The broker perhaps handles more business at less cost to himself than any of the middlemen engaged in the fruit and vegetable trade. His business is largely one of personal service. His success depends upon his honesty, energy, shrewdness, and his ability to sell. He has no substantial amount of capital invested. His heaviest expenses are usually office rent, clerical help, and telegraph charges.

Compensation of Brokers

Following are typical brokerage charges:

	<u>Per Car</u>
Barreled apples .....	\$15
Boxed apples .....	20
Western cantaloupes .....	20
Texas onions .....	15
California onions .....	20
Eastern and Northern late potatoes.....	10
Watermelons .....	10
Citrous fruits .....	\$18 to \$25

Brokerage rates are not entirely uniform. They vary according to the individual broker. Some brokers handle certain products cheaply to attract other products. The rates shown are, however, illustrative of the charges generally prevailing for this type of service in the large markets.

THE SALES REPRESENTATIVE

Large car-lot distributing organizations, both those operated on the cooperative plan and those operated with private capital, maintain salaried representatives or employees in some of the larger fruit and vegetable markets. In the small markets they are

usually represented by brokers, sometimes under contract. Sales representatives are maintained in large markets only when the organization they represent is conducting a large volume of business in that city.

### Services Performed by Sales Representatives

The sales representative performs for his employer the functions a broker performs for his principal. However, as the firm's local salesman, he works for only the one firm.

In addition to making sales of cars that are to be shipped, that are en route, or that have arrived, he represents his organization whenever sales of its goods are offered at auction. He watches the interests of his employer in the market to which he is assigned. Some of the larger marketing organizations maintain dozens of sales representatives, or branch offices.

### THE CAR-LOT RECEIVER

The car-lot receiver buys and sells car-lot shipments of fruits and vegetables. He begins the process of dispersing or dividing the car-lot shipments.

### Sources of Supply

All the avenues of assembling, shipping, and marketing fruits and vegetables as they converge at the large receiving and distributing markets are open to the car-lot receiver for his supplies. He may purchase car-lots of fruits and vegetables from farmers' cooperative marketing associations, country merchants, traveling buyers, buying brokers, individual growers, or city brokers.

### Methods of Purchase

A few of the various methods the car-lot wholesaler uses in purchasing his supplies are:

He may buy from a shipper through a city broker located in his own market.

He may arrange with the broker for the purchase of a car after it has been shipped, but before it has arrived.

He may employ buyers and station them in important shipping districts to purchase car-lot shipments for him from individual growers, resident dealers, or cooperative associations. This method of purchase enables him to ascertain the quality and condition of the product through his own employee before purchase is made.

He may buy direct from individual growers, country merchants, cooperative associations, and so on, by telegraph, mail, and telephone.

He may enter into advance agreements with growers, under which the growing and marketing is to be done under a joint account.

He may advance money to the grower to aid him in meeting his current production costs under an agreement whereby he will market the output.

In the smaller markets, especially, he will purchase supplies direct from near-by growers or truckers who haul their products to market.

### Tendency to Specialize

The organization maintained by a car-lot wholesaler and his methods of doing business depend to quite a considerable extent upon the size of the city in which he is located. In a large market like Chicago, there are car-lot wholesalers who specialize in the handling of only one, or two, or three important fruits or vegetables. Some firms will deal mostly in potatoes, some in apples and peaches, and so on.

The distribution of such commodities is so heavy, both in the city and to tributary towns, that

dealers can afford to devote a large part or most of their time to one or two commodities. They become specialists in these crops and are better able to keep informed of market conditions and consumer's demands than when their interests are more diversified and the quantity of a single product handled is less.

Some of the smaller markets, because of their limited size, cannot use a full car of certain highly perishable fruits or vegetables. It is, therefore, frequently necessary for two or three car-lot wholesalers to arrange for a "pool car" and divide the contents of the car among them when it arrives. This occurs in distributing such products as strawberries, cherries, and some of the more perishable and less popular vegetables.

#### To Whom the Car-lot Wholesaler Sells

In a few of the larger markets, the car-lot wholesaler sells both for use in his own city and for shipment to outlying towns. This is true chiefly of such products as potatoes and watermelons.

The chief service of the car-lot receiver, as he is considered in this lesson, is to break up car-lot shipments as they arrive, and start the process of dispersing or dividing the larger shipments.

In the large markets, the car-lot wholesaler sells principally to the jobber, the second intermediary in the series of distributing agencies operating in the large markets.

In many of the smaller markets, he may sell direct to retailers as well as to jobbers.

In both large and small markets, and especially in the latter, the car-lot wholesaler sells to jobbers and retailers operating in outlying cities and towns.

He may also sell through auction companies and to chain-store companies.

In the case of highly perishable products, such as strawberries, some railroads issue passing reports of cars en route showing where the car is on each day, and are thus able to notify the consignee before actual arrival. Such advance notice enables him to issue necessary instructions and make arrangements for prompt handling of the contents of the car after arrival.

Except in the case of very perishable goods, the railroad follows the practice of notifying the consignee of the car after it has arrived, confirming its telephone notice by written notice showing car number, initials, and contents.

In the larger markets, the railroads have special yards for placing cars containing produce. In these yards, inspection, unloading, and selling is carried on. Some car-lot wholesalers have special sidings running to their places of business, and all cars shipped to them are usually placed on these sidings without special instructions.

Why Inspection Is Made—Inspection of the contents of the car is made as soon as possible after arrival. The inspector may be the car-lot wholesaler or his representative. Should preliminary inspection reveal an unsatisfactory condition with respect to the contents of the car which might later be a subject for discussion with the shipper with a view to price adjustment, or the basis of a claim against the railroad, the car-lot wholesaler will frequently request that an inspection be made by a government inspector and an official inspection certificate issued.

Many cars of fruits and vegetables arrive in the large markets over which disputes arise. Serious damage may occur in transit; the grade of the product may not be in accordance with the terms of sale; or the product may have been seriously injured by disease, frost, heat, or other influences which may detract from its market value.

Such of these conditions as truly exist are shown on the official certification of inspection and may be used as a basis for settlement or adjustment with either the shipper or the railroad. Inspection is completed, if possible, before the car is offered for sale.

Why Rejections Are Made—If a car-lot wholesaler inspects a car of fruits and vegetables bought and shipped to him (but not paid for) and finds it unsatisfactory, he frequently will reject it. His rejection may be outright, or conditional acceptance may be offered.

An outright rejection is a complete refusal and cancellation of the contract of purchase. In such case, the car-lot receiver telegraphs the shipper he will not accept the car in question. The shipper then must make other disposition of it. If the car-lot receiver does not reject the shipment completely, he will request a discount in price as a condition of acceptance. If this is agreeable to the shipper, the car-lot wholesaler will settle accordingly and complete the transaction.

Rejections may be made for many reasons. The product may not prove to be as represented by the shipper. The market price may have declined between the time of purchase and the time of arrival of the car so that if the car-lot receiver accepted the shipment, he would inevitably suffer a loss in the transaction. Some rejections are justified; many are not. Government inspection has reduced the number of unjustified rejections. Rejections based on a declining market are unjust; they are unfair. The best firms disapprove of the practice; it injures their standing as buyers.

Damage Claims—Should the examination of a car by the receiver or the inspector show the contents damaged, presumably while in transit, a claim for damage may be filed with the railroad company.

Usually the car-lot receiver will accept the car and sell it for the best price obtainable, later filing a claim with the railroad company. The car is accepted from the railroad "under protest" which permits filing a claim later. The protest to the railroad company might take the following form:

Mr. J. J. Doe,

Local Freight Agent, X. Y. Z. Railroad Company,  
Chicago, Illinois.

On November 14, 1922, you notified us of the arrival of GN 56473, containing apples. This is to inform you that the contents of this car did not arrive in good order, and we hereby notify you that the receipt of this car and the payment of freight is made under protest, and claim will be entered for the following reasons: Entire car is badly shifted, causing a number of boxes to be broken and contents spilled on floor. Exact amount of damage cannot be determined until car is unloaded.

Signed \_\_\_\_\_

Consignee.

This written notice is sent to the railroad before unloading so the railroad company may have an opportunity to make immediate inspection to protect itself. As soon as the exact loss can be determined by the receiver, he files a claim in accordance with printed railroad instructions in which he must give full details to substantiate his statements.

How Sales Are Made—In most markets car-lot wholesalers sell to jobbers either before the car is unloaded or after the products have been carted to the store. The large wholesalers have salesmen located in the produce yards to sell direct from the cars. Salesmen are also stationed at the store, as sales of some commodities are always made there, and many of the smaller jobbers or retailers do not visit the produce yards. Sales direct from cars save

drayage for many buyers attend to the hauling of the purchases made by them.

The greater part of the car-lot wholesaler's business is done early in the day. The wholesale markets in some cities open before five o'clock in the morning. In the larger markets, sales to jobbers will be well over by noon.

In addition to early sales made at the cars and from the store to jobbers and retailers, telephone orders will be received from grocers in all parts of the city for deliveries to be made later in the day. Many sales are made for cash but, of course, as in all merchandising, credit is extended, but settlement is usually demanded within a period of from 10 to 15 days.

During the day, shipments are made up for distribution to dealers in outlying cities and towns. These shipments are made in response to orders received by mail, telegraph, and telephone, and from salesmen employed by the car-lot wholesaler.

Distribution of less than car-lot shipments to small towns is an important part of the business of a car-lot wholesaler, especially in a small market. As a rule, these sales are probably more uniformly profitable than those made in his own city. The prices charged are of necessity higher than those prevailing to the city trade, the increase being justified by the extra packing and drayage charges involved.

Many of the country merchants do not keep fully in touch with market conditions. They prefer to place their orders regularly with firms with whom they have been dealing for a long time and from whom fair treatment has been received. From 30 to 60 days' credit may be extended. This condition results in the energetic car-lot wholesaler having a fairly steady and dependable country trade.



### THE COMMISSION MERCHANT

The commission merchant receives shipments of fruits and vegetables both in car-lot and less than car-lot quantities. He may sell fruits and vegetables in car-lot quantities, but his sales usually are in less than car-lots.

The distinction between the car-lot wholesaler and the commission merchant is in the ownership of the goods handled rather than in different methods of conducting the business. The car-lot wholesaler usually owns the goods he offers for sale or at least has a substantial financial interest in them. The commission merchant, acting strictly as such, does not own the goods he is offering for sale. He is a professional agent whose business is selling fruits and vegetables for a commission.

He has control of the goods he offers for sale, all negotiations with prospective buyers are carried on in his name, and he may dictate the terms and conditions of sale. If he is given specific instructions from the shipper, however, he must obey them. Moreover, he is responsible to the shipper for a proper accounting of transactions effecting goods placed in his care by the shipper.

The commission merchant, like nearly all other agencies mentioned in this lesson, does not necessarily confine himself to selling fruits and vegetables on commission. He may also serve as a car-lot wholesaler and jobber.

#### Source of Supply

The commission merchant may receive consignments of fruits and vegetables from any of the marketing agencies operating in shipping districts. Consignments may be received voluntarily or as the result of solicitation. The commission merchant may send circular letters to large lists of growers and local shippers, usually just in advance of the

shipping season. He advertises freely, usually in trade papers, and may solicit shipments through special representatives. If he has a well established business, he will have a clientele from whom he may expect consignments each season.

### Instructions Should Be Given By Shippers

The shipper, whether he be an individual grower, a manager of a local association of farmers, or a country dealer, when sending goods to a commission merchant to be sold, should always telegraph or write him when shipment is made and the necessary details concerning it.

Special instructions concerning terms of sale, or arrangement for settlement, or any other instructions the shipper may desire to give should be included in this notice or sent previous to shipment. This is necessary so the commission merchant may have full knowledge of what he is expected to do, thus avoiding needless confusion and misunderstanding. Thus, an apple shipper in Washington when making a consignment of a carload of apples to a commission merchant in Minneapolis might telegraph as follows:

Am today consigning you car GN 56042 containing 630 boxes extra fancy, balance fancy. Routed via Great Northern. Handle for my account. Letter and bill of lading follow.

In the letter from the shipper that would follow, the commission merchant would receive confirmation of commodity, shipping date, place of shipment, routing, car number and initials, detailed manifest of contents of the car showing number of packages, size and type of packages, variety, grades, and any special instructions or information the shipper considered it necessary to send the consignee.

### How a Consignment Is Handled

When a consignment of fruits and vegetables arrives for a commission merchant to be sold for the

account of the shipper, his procedure is quite similar to that followed by the car-lot wholesaler. He is notified of the consignment's arrival by the railroad company. As soon as the arrival notice is received, he arranges for the transfer of the goods to his place of business or makes sales direct from the car.

As the goods are sold, a sales ticket is made for each lot so that when the entire consignment is disposed of, a detailed "account sales" can be made to the shipper.

If the entire consignment is sold at the same price, merely the price and number of packages sold and the total amount received is shown. If the consignment is broken up into small lots and these lots sold at different prices to different people, the total number sold at each price will be shown.

The information reported to the shipper in account sales varies. There is no standard form and no standard method. Some firms furnish practically no details unless requested by the shipper.

From the total amount received by the commission merchant for the consignment,, he deducts

1. Freight or express charges advanced by him
2. Drayage charges
3. Charges for repacking broken packages
4. Commission for selling
5. Any other charges

The account sales is mailed to the shipper with the check of the commission merchant for the balance due. Commission charges vary from 10% to 15% of the gross selling price. Reproduced herewith is a sample of a typical account sales for a consignment of apples to a commission merchant.

**A SAMPLE "ACCOUNT SALES"  
THE A B C COMPANY  
WHOLESALE COMMISSION MERCHANTS**

RECEIVED — Chicago, Ill.,  
November 16, 1922.

SOLD FOR ACCOUNT OF — John Doe,  
Wenatchee, Washington

230 boxes Extra Fancy Jonathans @ \$2.50...	\$ 585.00
400 boxes Fancy Jonathans @ 2.00...	800.00
	\$1385.00

	(Express	
CHARGES —	(Freight	\$ 441.00
	(Cartage	31.50
	(Commission	138.50
		\$ 611.00
	NET PROCEEDS (check enclosed)...	\$ 774.00

**IMPORTANT.** — Always Mail Us Notice The Day You Make Shipment

In theory, it would seem that the commission method of selling would be ideal. The shipper retains ownership of his product. The price he receives is the market on the day of sale, and, consequently, there is no speculation in his goods between the time he ships them and the day they are placed on the market. He assumes his own risk.

In practice, however, the commission method of selling fruits and vegetables has been subjected to many abuses. The fruit and vegetable commission merchant has been bitterly criticized. In fact, this form of selling fruits and vegetables has fallen into some disrepute.

If the returns the shipper obtains are not as expected, suspicion naturally results. Frequently the commission merchant is unjustly blamed.

The producer believes in his own goods. He naturally thinks they are as good as any that can be produced. He is usually quite unwilling to believe that his goods may have arrived in an inferior con-

dition or were of an inferior quality when compared with others offered for sale in competition.

Great damage may take place while goods are in transit, and while these facts may have been reported to the shipper and charges made for repacking or regrading the goods, the shipper is often unable to understand the condition under which the commission merchant handled them. Consequently, it is easy for mutual misunderstanding in the fruit and vegetable commission business. The perishability of the product contributes much to this condition of affairs.

#### The Commission Merchant An Outlet for Unstandardized Goods

Regardless of the fact that much adverse criticism of the commission merchant and his place in the fruit and vegetable industry is heard, and despite the decline in the commission business during recent years, we are likely to find this agency in our large markets for many years to come.

The commission merchant offers an outlet for unstandardized goods which the car-lot wholesaler will not buy unless he cannot get better stock.

The commission merchant will continue to serve the individual grower or groups of growers in small sections not organized to sell direct to car-lot wholesalers or who may not be visited by traveling buyers. When prices are declining, the car-lot wholesaler, who may also be a commission merchant, makes every effort to reduce expenses. He will reduce the number of his traveling buyers and solicit consignments to be handled on commission, thus reducing the risk to himself.

#### THE PUBLIC AUCTION

In some of the large fruit and vegetable markets, immense quantities of fruits are sold annually

at public auction. Sales total millions of dollars each year, and there is a tendency to use the auction system of selling more and more for products adapted to that method of sale. A whole lesson is devoted to this subject so it will not be necessary to say more here.

### THE JOBBER

In the large fruit and vegetable markets, the jobber is the intermediary between the car-lot wholesaler and the retailer. The car-lot wholesaler or commission merchant breaks up car-lot shipments into less than car-lot quantities and sells them to the jobber. The jobber, in turn, further divides these lots into yet smaller lots for sale to retailers who require only a few packages of perishable products each day.

#### Functions of the Jobber

In the smaller fruit and vegetable markets, the jobber's work is largely carried on by the car-lot wholesaler or by the commission merchant.

Speed is an essential factor in distributing fruits and vegetables. In the large markets where many cars of perishable fruits and vegetables arrive daily, the car-lot wholesalers or commission merchants are often not equipped to attend to the many small sales which must be made to serve the retailer's needs.

Further division of labor is necessary to handle the dividing of large shipments so they may be quickly distributed to the retail trade. Somebody must render this service. The jobber came into existence to do this part of the work.

Several jobbers each selling part of a car of some perishable commodity like strawberries can sell the car quicker than it could be sold by a car-lot wholesaler or commission merchant who hasn't

the time to sell a few crates to many small retailers. The jobber makes quick sales, operates on a comparatively small margin, and makes his profit by rapidly turning over his capital.

### Source of Supplies

The fruit and vegetable jobber obtains his supplies mainly from car-lot wholesalers, commission merchants, auctions, and farmers' public markets. He may however, in some instances and with some commodities, do the work of car-lot wholesaler or commission merchant, and purchase car-lots from brokers or receive consignments on commission. Furthermore, he will frequently handle less than car-lot consignments from growers.

### Method of Sale by Jobber

His method of sales are practically identical with those followed by the car-lot wholesaler. He sells to the retailer either in person at his place of business, or goods are sold on telephone orders. He sells for cash and on short time credit, chiefly for cash.

## THE RETAILER

The retailer performs the last part of the process of distributing fruits and vegetables from the producer to the consumer. The retailer is in position to supply fruits and vegetables to the consumer at the time, at the place, and in the form required by him to meet his needs and desires.

### What Services Are Required of Retailer

The services of the retailer and his methods of conducting his business are better known to the public than those of any of the other marketing agencies mentioned in this lesson.

Briefly, the retailer acts as the purchasing agent for the community which he serves. It is his duty to assemble the various kinds of fruits and

vegetables of the quality, quantity, and variety needed to meet the daily needs of his customers; to serve these products to his customers in as small quantities as may be desired; to deliver his customers' purchases to their residences if they so desire; and to finance his customers by the extension of credit.

### Different Types of Retailers

Fresh fruits and vegetables are found in several types of retail stores. While there are some fancy fruit stores, and fruit stands, and hucksters who limit themselves to the handling of fruits and vegetables, the consumer obtains most of these products from the corner grocer, the chain store, and the public retail market.

The Corner Grocer—The corner grocer buys his fruits and vegetables from jobbers in the large markets, or from car-lot wholesalers in the smaller cities, and from truck farmers either direct or at farmers' public markets.

The chief distinction between the different types of retailers mentioned in this lesson is in the kind of service rendered. The independent retailer carries on quite an extensive credit and delivery service for his customers. These features of the retail service are usually omitted by the chain stores.

Chain Store Corporations—The chain store corporations buy chiefly from car-lot wholesalers and jobbers. In the large markets where many stores are operated by one corporation, its daily needs are large enough so that most of the fruits and vegetables sold in its branches can be purchased in carload lots. Car-lot purchases may also be made through city brokers and at auction.

Some of the chain store organizations are now buying such commodities as potatoes direct from the shipping districts where they have representatives



located. These organizations are large enough to undertake under their own direction and with their own capital, the purchasing, assembling, shipping, and distributing. Thus, they perform all middlemen service by purchasing in large quantities and performing certain expensive services for themselves, the chain store is able to sell on a narrower margin of profit than is the independent retailer for this reason. This system of retailing has expanded rapidly in recent years.

The Huckster—The huckster so frequently seen on the streets of the residential districts of the large cities, buys his supplies chiefly from jobbers, auctions, and at farmers' public markets. He brings his whole assortment of goods to the consumers home. Purchases from hucksters are for cash. The housewife selects her purchase personally, which is perhaps a convenience in that she is not required to go to the store or public market, and is an advantage over the system of telephoning her order to the grocer and awaiting its delivery.

Little capital is required by the huckster, his costs of doing business are low, but his volume of business necessarily limited by his facilities—a horse and wagon or a motor truck.

The Public Retail Market—This type of public market plays an important part in the distribution of car-lot shipments from distant producing areas, as well as in distributing locally-grown products. The modern public retail market equipped with sanitary and attractive stands affords a wide selection for the prospective customer.

The successful public retail market carries a good selection of fancy fruit and vegetables. Stands in public retail markets are specialized so that the customer may purchase meats, butter, eggs, groceries, bakery goods, and so on, all in the same building and under the most favorable conditions for selecting the articles desired.

### FARMERS' PUBLIC MARKETS

Farmers' public markets are maintained in most of the large cities. These markets are usually located along the curb of streets designated by the city for public market purposes, or are conducted under open structures erected by the city for the purpose of affording a place for local farmers and truckers to bring their products for direct sale.

Sales are made to jobbers, retailers, hucksters, and consumers. In some cities where the farmers' market is an important feature, because of large trucking districts near at hand, certain hours of the day are devoted strictly to selling direct from producer to consumer. Other hours are devoted to selling larger quantities to retailers and jobbers or to others who purchase to resell.

The advent of the motor truck and the development of truck farming adjacent to large markets has increased the importance of farmers' public market. In certain seasons, the farmers' market dominates the fruit and vegetable trade in certain cities. In the distribution of car-lots arriving from distant producing areas, however, they are relatively unimportant.

### THE AUCTION LESSON

The growing importance of fruit auctions makes the next lesson unusually interesting.

The growth of cooperative shipping will no doubt have a tendency to increase the business of auction companies. And many of those who have studied the marketing situation thoroughly believe that each succeeding year will see a larger percentage of fruits and vegetables marketed cooperatively.

Auction selling has been worked out carefully, almost scientifically. Consequently, you have a right to look forward with eagerness to the lesson on auction selling.

## GLOSSARY OF MARKETING TERMS USED IN THIS LESSON

account sales. A statement made to a shipper by a commission man or a broker in which all information regarding terminal charges and the sale of the products is recorded. The account sales is usually accompanied by a check or a draft, remitting to the shipper the difference between the sales price and the terminal charges.

car-lot receiver. One who buys car-lot shipments of products at a terminal market, and resells in car lots or less.

clientele. n. The body of clients. In the case of a middleman, the clientele will include both those for whom he sells, and those to whom he sells.

passing reports. Reports furnished by the railroads at certain junction or diversion points showing the car numbers and dates on which cars passed through these points. Used by shippers or receivers to keep track of location of cars in transit so as to arrange for diversion or to provide prompt handling upon arrival at destination.

pool-car. A carload of goods which is divided between two or more wholesalers.

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Note: This is a part of the Marketing Dictionary supplied with this course.

**QUESTIONS FOR LESSON 8**

As soon as you have mastered this lesson, answer these questions and submit your answers to The American Institute of Agriculture, Chicago, Ill., for grading or correction.

Do not fail to write your name, address, and matriculation number plainly on each set of answers you send. Be sure to give the number or letter of the lesson, and the number of each question answered. Write the question in full before writing the answer. Be brief and explicit. Confine your answer to the length indicated, if possible. Use a typewriter, if you have one.

Answer all questions. If any are omitted, the omission will count against you.

- I. Name the four classes of buyers that commonly purchase fruits and vegetables at the shipping point.
- II. Name the eight classes of marketing agencies that serve as middlemen between the shipper and the wholesaler or consumer.
- III. Why is there often less risk in selling through a broker than through a commission man? (60 words)
- IV. What other central marketing agency operates in a somewhat similar way to a broker with the exception of compensation?
- V. How do the operations of a car-lot receiver differ from the operations of a commission man? (35 words)
- VI. Why is it that unstandardized goods are more likely to be shipped to a commission man than to an auction company? (40 words)
- VII. What service does the jobber of fruits and vegetables perform? (35 words)
- VIII. What three types of retailing agencies distribute the largest part of the fruit and vegetable crops?
- IX. Who is it that does the selling in farmers' public markets?

## LESSON 9

## HOW TO STUDY THIS LESSON

You will undoubtedly find this one of the most interesting lessons of the entire course. There is something attractive about an auction sale and, as you will learn, auction sales are becoming unusually important in the fruit and vegetable industry.

Read the lesson entirely through with great care, then make a list, without referring to the lesson, of those points which interested you most. Go back to the lesson and study these points individually, familiarizing yourself thoroughly with all details.

The material which you find tabulated is put into that form to make it easier for you to comprehend it. Consequently, it is always important to drill yourself on all tabulations. You may not find it necessary to remember the entire list of cities in which auctions are maintained, but it is important to remember at least the five most important ones, and the one that is nearest to your town.

It is also important to drill yourself on the list of fruits and the list of vegetables which are commonly sold at auction. Do not understand this list to mean that no other products will be accepted by auction companies, but it is not likely that the sale of other products would result very satisfactorily unless you have quite a large shipment of high-class goods to offer.

Study with unusual care that section entitled "Who Serve As Auction Receivers?" It is important that you recognize the fact that auction companies ordinarily do not wish to accept consignments direct from shippers. You must have some broker or other agent represent you in dealing with the auction company.

By all means, visit a fruit auction at your first opportunity. If you cannot visit an auction some time soon, try to get a copy of a price released catalogue through some broker or dealer in the nearest city. You will find it unusually interesting and profitable to compare prices obtained at auction with those quoted in market reports.

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# THE AUCTION METHOD OF SELLING

BY CHARLES J. BRAND\*

Other lessons in this course have given an insight into the wide variety of ways in which private sales are accomplished and the technique of making such sales. In point of volume and value of product, private sale is unquestionably more important than public sale. Nevertheless, the principal public sale method, the auction, is applied to so important a part of the fruit sold as to deserve separate and detailed discussion in this lesson.

## WHAT A FRUIT AUCTION IS

A fruit auction is the technical sense used in this lesson, is a congregating place for buyers and sellers, provided with display facilities and with auctioneers to sell the products. The great auction places are permanent institutions so located as to give ready access by steamship, car ferry, or railroad for the prompt, efficient, and economical unloading of commodities. In port cities, unloading terminals are frequently on the piers. In inland cities, unloading platforms attached to the other auction facilities are along railroad sidings or in railroad yards.

## Physical Facilities

The physical facilities of the fruit auctions are rather simple and include, in addition to unloading platforms, warehouse facilities in which the carloads or cargoes of commodities may be placed, properly classified, for delivery to purchaser after the sale by auction has been effect-

\*Formerly Vice President and General Manager of the American Fruit Growers, Incorporated. For complete statement of his experience, see Lesson 1

ed. A small auction will have space for only 5 to 10 cars, but the big auctions are prepared to take care of 200 to 300 cars, or even more, on their warehouse floors.

Connected with the warehouse and sometimes on its main floor are display rooms with suitable lighting for the prompt and careful examination of goods for sale. In the largest auctions, the display rooms are separate because of the numerous lines of goods to be sold.

The third and perhaps most important part of the auction place is the auction selling room. Tiers of seats are arranged so that the auctioneer can see everyone present and every buyer has an unobstructed view of the auctioneer. Auction selling rooms vary greatly in size, but usually have seating capacity for 100 to 300 buyers.

The auction block is usually a high counter with a chair so that the auctioneer can sit or stand as he may choose, from time to time.

#### Who Own Auction Companies?

Nearly all of the auction companies are corporations, owned in the usual manner by stockholders. It is of interest, however, to inquire as to who are the stockholders. Lists of stockholders are the private property of the corporations and I do not have them. However, I am familiar in many cases with the owners.

Generally speaking, a majority of auction companies are either owned outright, or controlled through stock ownership by members of the trade, either on the buying or the selling side. In some cases, control is centralized in the hands of the shipping and selling agencies. In others, the buyers are in complete control of the company. In still others, a combination is agreed upon when the companies are organized and the percentage of buying and shipping ownership is kept fairly equal.



A fairly large percentage of the whole number of auction companies is owned by individuals, partnership, or corporations having no interest whatsoever in the fruit trade, other than their auction interests.

The obvious advantage of the last-named situation is that motives of self-interest will not be so likely to affect their operating policies and methods. In general, however, it may be said that

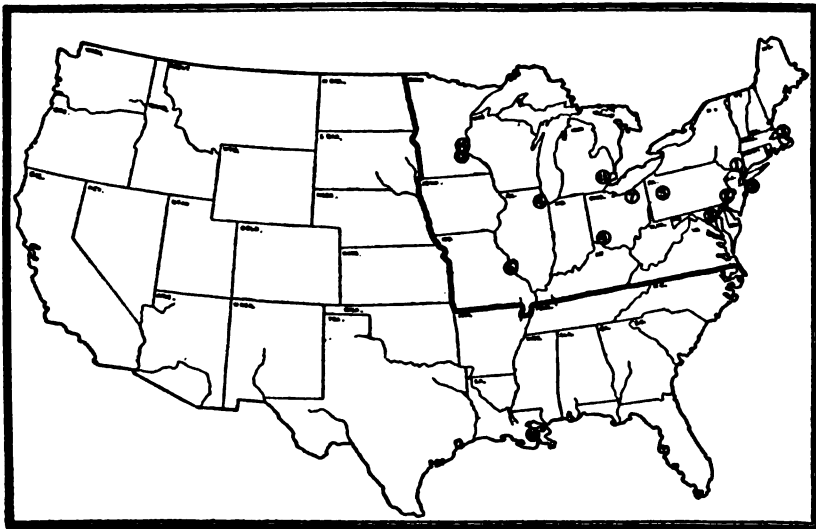


FIGURE 1. WHERE FRUIT AUCTIONS ARE LOCATED

This map shows not only the locations of the 14 principal auction markets, but the relative importance of each. The number indicates the rank of importance of the auction market

both the buying and selling sides of the trade are so watchful that a company failing to serve impartially is likely soon to come to grief.

No criticism of ownership or control is intended, as the establishment of an auction in a market is occasioned frequently by the needs of those who ship largely to such market or those who purchase their products there for subsequent resale.

WHERE THE FRUIT AUCTIONS ARE

There are 14 cities in the United States having, in all, 21 fruit auctions. These cities are shown on the map, Figure 1, and are numbered in the order of their importance in gross sales for the year 1921. They are also shown in the order of their importance in Table I.

TABLE I. LOCATION OF 21 FRUIT AUCTIONS

Rank:	City	:No. of: : Auc- : tions	Rank:	City	:No. of : Auc- : tions
1	:New York	: 4	: 8	:Baltimore	: 2
2	:Philadelphia:	2	: 9	:Cincinnati	: 1
3	:Boston	: 2	: 10	:New Orleans	: 1
4	:Chicago	: 2	: 11	:Detroit	: 1
5	:Pittsburgh	: 1	: 12	:Newark, N.J.:	1
6	:St. Louis	: 1	: 13	:Minneapolis	: 1
7	:Cleveland	: 1	: 14	:St. Paul	: 1

With the exception of New Orleans, you will see that the auctions are concentrated in the northeast quarter of the country. This area, which may be regarded as bounded roughly by the eastern lines of the states from North Dakota, to Kansas, and by the northern boundary lines of Arkansas, Tennessee, and North Carolina, according to the census of 1920, had 63.9 per cent of the inhabitants of the United States.

Fully one-fifth of the people of the United States live in the 14 cities that have auction markets. When the census of 1919 was taken, their population was 21,940,655 persons out of a total of something over 105,000,000.

The reason, then, for the concentration of the auction method of selling in the northeastern United States is that it is the section in which concentration of population forces the use of a method that

will move large volumes of perishable goods quickly, before they get out of condition and before market values change to the disadvantage of the purchaser.

### DEVELOPMENT AND IMPORTANCE OF FRUIT AUCTIONS

There are records of auction sales of fruit as early as 1827 in New York City. The oldest companies now in existence are a New York company claiming continuous existence since 1839, and a Boston partnership continuously in operation since 1847.

It is generally accepted that the real stimulus for the permanent establishment of auctions comes from the shipments to great Atlantic port cities of Sicilian and Italian citrus fruits, particularly lemons. The amount imported in a single cargo, even in the days of smaller ships, was so large that it was necessary to effect sales quickly in order to put the product in the channels of consumption.

### One-fifth of Fruit Sold at Auction

Specific statistics are not available as to the gross amount of business done by the 21 great fruit auctions. However, careful estimates place the figure at about 150 million dollars annually. Between one-third and one-half of this huge turnover is concentrated in New York alone.

Expressed in carloads, the range in amount of goods handled is from under 2,000 cars to above 25,000 cars per auction company.

Even remembering that bananas constitute a very important part of the business of certain eastern auctions and as they are not produced within the United States, would not be included in the total value of our fruit crop, 150 million dollars is a very considerable part of the total value of all fruits, which for 1919 was estimated at 775 million dollars. As this total includes a large amount of

products which are not marketed through commercial channels, the importance in volume and value of the goods handled through auctions is readily apparent. It is probable that auctions handle about one-fifth of the commercial fruit crop.

### Auction Growing in Importance

Although there has been a reduction since 1915 of two cities in the number where auctions were located, it may be stated positively that the auction is growing constantly in importance. Estimates for five years ending with 1922, show that the increase is over 100 per cent.

Competitive conditions in certain cities may result in the organization of an auction which temporarily may be a success and serve a useful purpose. Corrections of abuses or great fairness in competitions may result from the existence of an auction which may fail to be a paying venture after it has served to correct conditions.

It is safe to say that, as great centers of population increase in size, the number of auction companies will continue to grow. Volume of business will be the first consideration in creating new companies and dissatisfaction with treatment received from other selling agencies will be the second cause in order of importance.

Buffalo, Toledo, and Kansas City, formerly had auction companies which later went out of business. Pittsburgh for a time had two companies, but one was not able to thrive under the competitive conditions of the market.

### Auctions in Foreign Markets

In England, France, and Germany, auction sale is resorted to in many markets, not only for fruit and vegetables but for meats and other products. The Smithfield meat and livestock market in London is one of the greatest in the world.

The Covent Garden auction for fruit and vegetables is of great and growing importance. Probably as much as 80 per cent of all foreign fruits and vegetables in London is being sold at auction.

Berlin conducts auction markets in connection with its municipal markets, as do other German cities.

### **AUCTION COMMODITIES AND THEIR SOURCES**

Considering the wide range of fruit and vegetable crops that might be considered eligible for auction sale, the range actually sold in practice is rather small. The reason will be brought out to some extent, later.

The most important products and sources, stated at random, are as follows:

#### **Fruits**

Oranges from California, Florida, Italy, and Porto Rico

Grapefruit from Florida, Porto Rico, California, and the Isle of Pines

Lemons from California and Sicily

Pears, prunes, and cherries from Oregon, Washington and Idaho

Grapes, peaches, pears, prunes, plums, apricots, and cherries from California

Apples, in boxes, from Wenatchee, Yakima, Hood River, Watsonville, Colorado, Utah, and Idaho

Bananas from Costa Rica, Guatemala, Haiti, Jamaca, and other tropical regions

Pineapples from Cuba, Porto Rico, Isle of Pines, and Florida

Grapes (Almería) from Spain

Chestnuts from France, Spain, and Italy

Vegetables

Asparagus  
Beans  
Broccoli  
Cabbage  
Cantaloupes  
Celery  
Corn  
Cucumbers  
Endive

Garlic  
Horseradish  
Lettuce  
Onions  
Peas  
Peppers  
Potatoes  
Tomatoes  
Watermelons

The items underscored are the most commonly sold.

Some Fruits Sold Almost Wholly at Auction

Before the Second Pan American Scientific Congress in January, 1916, V. K. McElheny, Jr., President of the American Fruit and Produce Auction Association, stated that

85 per cent of Florida oranges and grapefruit

75 per cent of pineapples, oranges and grapefruit from Porto Rico, Cuba, and the Isle of Pines

98 per cent of oranges, lemons, cherries, peaches, apricots, pears, plums, and prunes from California

100 per cent of Sicilian lemons

100 per cent of Almeria grapes from Spain

100 per cent cherries, pears, and prunes from the Pacific Northwest, then being sold in cities having auctions, were sold at auction.

Practically all of the bananas that are brought into New York and Baltimore and some of those shipped to other cities by the United Fruit Companies, Atlantic Fruit Company, and other banana importing fruit firms are sold at auction.

Standardized Goods Only Are Available for Auction

The most essential qualification of fruit for auction selling, is that the commodity must be one for

which standards exist that are well understood, both by the distant producer and the large scale purchaser in the far-away city.

The commodity must be one that is supplied with sufficient regularity so that bidders can safely rely upon the auction as a source of supply.

The quantity in each shipment must be either in car-lots or other large units in order that the sale may be effected at a minimum of expense per unit.

The commodity must be one already customarily bought at auction and by reason of its compliance with the other qualifications mentioned, eligible for sale at auction.

It is apparent that, if goods are offered at auction that can be bought more cheaply at private sale, the auction will not succeed. Naturally, commodities similar to others already sold at auction, originating in the same shipping territory, handled in the same way, graded and packed suitably, change more readily from the non-auction to the auction class than do other kinds of goods.

If goods are held in cold storage at or near the auction display and warehouse rooms, it is practicable to sell in smaller quantities than if they are moved from a distance. It is always possible to withdraw from storage to supply the trade.

#### WHO OWNS PRODUCTS SOLD AT AUCTION

Only in rare cases, which will be discussed separately, does an auction company take title to the goods sold by it. It acts solely in the capacity of a selling agent, usually at a fixed rate of commission, or at a fixed rate per package, varying for the different kinds of commodities.

The goods sold at auction are usually owned by a shipper, a grower for whom the shipper is acting, a

country car-lot buyer, a cooperative association, an exchange, or some other agency of production or distribution.

### Users of Auction Method

As an illustration of the specific enterprises that are very large users of the auction method in the various cities, consider the following:

American Fruit Growers, Inc.	F. H. Buck
Associated Fruit Co.	Egan Pickett & Co.
Banana Sales Corporation	E. Y. Foley
California Fruit Distributors	Frost & McNab
California Fruit Exchange	Leonard Gentile
Porto Rico Fruit Exchange	Sgobel & Day
DiGiorgio Corporation	Stewart Fruit Co.
Florida Citrus Exchange	Thurston Fruit Co.
Pacific Fruit Exchange	United Fruit Growers
California Fruit Growers Exchange	

Most of the selling organizations mentioned are engaged primarily in distributing products for their grower members or for independent growers with whom they have marketing contracts.

The bananas sold by the United Fruit Company are practically all grown on its own properties.

Only a portion of the total sales of these companies is made in the market in which auctions operate. Where the selling policy is not to "split" the sales, (that is sells a part f. o. b. to dealers who will sell in the auction market in competition with the fruit of the selling organization) all sales in auction terminals go under the hammer.

### WHO SERVE AS AUCTION RECEIVERS

The goods reach an auction usually in one of three ways.

1. By direct consignment to the auction company
2. By consignment to "auction receivers"



### 3. Through local salaried representatives of marketing organizations

Auction companies prefer not to receive goods by direct consignment which requires their acting as receivers. In most cases, such goods are placed in charge of one of the recognized receivers and the consignor is notified to that effect.

### Services Rendered by Auction Receivers

The typical auction receiver is an independent operator, usually a commission merchant or broker, who receives goods direct from producers or country assemblers and places these shipments for sale at auction. Another class of receiver is composed of the city representatives of large marketing organizations, usually salaried employees who are stationed in the principal auction markets of the country. The auction receiver acts as terminal agent and conducts all business arrangements with the auction company for a few or many shippers.

The service rendered by receivers varies widely. The usual commission charge is 5 per cent, out of which the charge of the auction company, averaging from 1 ½ to 3 per cent, are paid. The rest is retained by the receiver. Some receivers will agree to perform the usual duties, as they understand them, for 1 per cent of the gross sales. This is in addition to the auction charge for selling. Still other receivers will make a flat rate per car varying from \$10 to \$25. As a rule, those charging \$10 give little service other than listing the car with the auction company.

The most important users of the auction from the selling end, are car-lot distributors of all kinds, including agents of cooperatives, exchanges, representatives of national selling organizations.

Large individual shipping companies handle goods either for their own or other growers and

shippers accounts. Brokers represent outside shippers, large scale individual producers, commission receivers, and country buyers.

### Why Eastern Markets Are Used As Dumping Grounds

The large marketing organizations using the auctions, forward a steady volume direct to the auctions. In addition, there is a practice particularly among the shippers of California and the Northwest, to use the eastern auctions as "dumping grounds" for products that do not find a ready market in other ways.

For example: A car of California fruit may be billed to Chicago but arrives on a declining market and is sent on east. The sales manager, in the meantime, wires ahead to find a sale for the car. Failing to sell the car when it passes Pittsburgh or Buffalo with no market in sight, it is diverted to Philadelphia, New York, or Boston, to be sold at auction.

Or, a car may have been sold delivered at Elmira, N. Y., and on arriving shows unexpected amount of decay. If a satisfactory adjustment cannot be made, the car is ordered into Philadelphia or New York to be sold at auction.

### THE BUYERS AT THE AUCTION

Shippers	Hotels
Wholesale grocers	Chain stores
Clubs	Peddlers
Restaurants	Hucksters
Buying brokers for fruit stores	Pushcart men

While auction commodities are generally well-graded and uniform in condition and quality, they are not always standard. The peddler, pushcart, and huckster trade is especially important and useful in cleaning up lots that are not well graded or are in broken condition or otherwise not up to the

average quality required and expected in goods sold at auction.

### THE PROCESS OF SELLING AT AUCTION

An auction company does much more than provide a place and an auctioneer. It preforms all of the services of a selling agency. These various services are treated on the pages that follow and include:

1. "Lining up" the shipment
2. Displaying "parts of marks"
3. Issuing a catalog
4. Conducting the sale
5. Publishing prices secured
6. Financing shippers and buyers

#### "Lining Up" Shipment

No large lot of a perishable commodity is ever running, that is, of the same grade and sizes throughout. For example, a carload of Florida oranges may contain as many as five grades, the whole range of grades commercially recognized in Florida oranges. In other words, there may be fancies, brights, goldens, russets, and plains in a single car.

In addition, the full range or only a partial representation of the range of size usually packed in Florida may be present, as for instance, 126s, 150s, 176s, 200s, 216s, and 250s, the numerals referring, of course, to the number of oranges per box. In some cases, there may be two brands in the same car, necessitating a further classification by brand.

These various grades and sizes and brands must be sorted and sold separately. This is called "lining up". The lining up of the shipment is one of the important services that an auction company performs.

A cargo of bananas may contain one or two varieties, such as Roatans and Plantains, the common yellow and red varieties most frequently seen in the market.

There may also be a considerable range in the number of "hands" in the bunches of each variety.

Bananas are classified on the basis of the number of hands per bunch, the usual range being from six to nine hands. The simile is obvious, when one thinks of the way the individual bananas are arranged upon the fruiting stem.

A cargo of grapefruit from Porto Rico may be composed of several grades and, as in the case of oranges, a full range of sizes, such as 36s, 46s, 54s, 64s, 70s, and 80s.

Lining up is the process of sorting out the lots which makes up the shipment. Each separate class or mark is given a separate line in the catalog of sale.

### The Purpose of "Lining Up"

Lining up is done so that the buyers can quickly examine the particular grades of fruit in which he may be interested, and so that he may make note upon his auction catalog of quality, of his ideas of value, of condition, and so on. This enables him to bid more promptly and intelligently. It also hastens very greatly the delivery of goods after the sale is made.

### Displaying "Parts of Marks"

In the case of a number of auctions, the warehouse where the goods are unloaded from cars or ship

are at a distance from the display and sales rooms. In other cases, the warehouse rooms and the display rooms are the same.

In either event, a certain number of packages making up each line is opened by the auction company's employees, so that prospective buyers can examine them conveniently.

Where display and sales rooms are at a distance, the samples are carried by motor truck, cart, or otherwise to the display rooms to be put on view. The boxes or cases of fruit thus opened are always referred to as "parts of marks" not as "samples." The boxes that are opened are usually selected at random by workmen employed by the auction company, and the number used for display purposes varies with the different products. In some cases, one in 50 may be opened, and in others, as many as one in 20.

### The Auction Catalog

Catalogs vary greatly in character and form. Some are printed on cardboard sheets, each sheet being placed in a separate pigeon-hole, so that the buyer when he goes to the auction room withdraws from each pigeon-hole the sheets that make up the whole of the day's program of sale.

Other auctions have long, narrow folded sheets, each containing four pages, arranged in long columns with sufficient blank space at the end of each line for notations.

In still other cases, the catalog is so large that it reduced to a smaller number of lines per page and fastened together with the ordinary wire staples.

### What the Catalog Contains

Irrespective of physical make-up, shape, and other things, catalogs show the following:

1. The name and address of the auction company
2. The location of the salesroom
3. The names of the auctioneers
4. By reference at least, the terms of sale (A further statement on terms of sale will be found later)

25			26		
LINES	MARKS	DESCRIPTION	LINES	MARKS	DESCRIPTION
F C E 5164 MONDAY, JANUARY 22, 1951			F C E 5602 MONDAY, JANUARY 22, 1951		
<b>FLORIDA</b> Domino Brand ERROL M. SOHN, DISTRICT MGR. Manatee Citrus Sub. Exchange Bradentown Florida 1 C CAR 53700 VIA PENN. R. R. ORANGE FRUIT			<b>FLORIDA</b> Thistle Brand ERROL M. SOHN, DISTRICT MGR. Marion County Sub Exchange Mannville Fla. S S COMMANCHE VIA CLYDE LINE FLORIDA ORANGES		
255	30	11 BOXES	170	200-6 216-4 288-1	12 BOXES
256	46	32			
257	54	00	271	Parts of marks opened	1
258	64	55			
259	70	21	272	Golden 200-8 216-3 260-5	15
260	80	37			
261	90	1	273	Parts of marks opened	1
262	Parts of marks opened	7			
263	Golden 26-4 46-5 54-17	28	274	Bonnetts 176-3 200-6 216-3	13
264	64-8 70-9 80-6 96-3	28			
265	Parts of marks opened	2	275	Parts of marks opened	1
266	Bonnetts 46-10 54-18	27			
267	64-12 70-8	19	276	Plain 176-1 200-7 216-6 280-3 288-1	16
268	80-9 96-3	11			
269	Parts of marks opened	3	277	Parts of marks opened	1

FIGURE 2. A TYPICAL AUCTION CATALOG

You will notice that the sizes of the different lines vary from one box to 96. Space is allowed for entering the price and the name of the buyer

5. The date and time of sale
6. The initials and number of the car or the name of the ship from which the goods were taken
7. The name of the shipper, cooperative, or exchange for whose account the fruit is being sold
8. The name of the brand
9. The name of the variety, in case there are different varieties of the particular fruit
10. The grade
11. The numerical count per box or the commercial name of the shipping package
12. The number of boxes of each separate class

The auctioneer sells line by line or may, with consent or upon request, sell certain lines out of order.

See Figure 2, reproduction of typical pages from an auction catalog.

#### Position in the Catalog Is Rotated

As position in the catalog is important, this is usually rotated in order that all users of the auction may from time to time have the advantage of the better position at the early part of the sale. Lines containing a small number of packages are usually sold in their entirety. Those containing a larger number are frequently split up at the price of the first sale on that particular line. Sometimes the remnant of the line is sold by a renewed call (a new series of bids).

Some auction catalogs make it a practice also to show the name of the receiver who is acting as agent for the sale.

### How the Buyer Proceeds

Long enough in advance of selling time to give an opportunity to examine the goods on sale, the buyer proceeds to the auction room and secures a catalog or program of sale for the day.

The prospective buyer then proceeds to the display room and examines the fruit exhibited for sale. He makes note of the particular lines in which he is interested and on which he desires to bid, writing in the margin of his catalog his ideas of condition, quality value, and so on.

When he has completed this examination, he proceeds to the auction room and seats himself in the amphitheater ready to bid in competition with the other buyers present.

### How The Auctioneer Sells

The fruit auction is very similar to the many other forms of public sale with which Americans are so familiar. Sales of cattle, hogs, and sheep; of farm work animals and machinery; of real estate and household goods; of rugs, jewelry, and furniture, and surplus war materials are a common experience.

The personality and experience of the auctioneer, as well as the psychology of his methods plays an important part in his success. He is always assisted by at least one auction clerk, and usually by a second person who may be an assistant or relief auctioneer to make sure that no bids are overlooked and that purchasers are correctly identified in each case. The large auctions have as many as six auctioneers.

The auctioneer announces to the buyers the line in the catalog to be sold. The process of "lining up" and the use of the catalog will be described later.

He reads the description of the goods to be sold and calls them in the usual manner. Then he asks?



"What am I bid? How much am I offered?" Each auctioneer has ways of his own to focus the attention of the buyers on the goods he is offering. This may be accomplished by extolling the goods, by humor, by the peculiarity of his calling, by jest, or in many other ways. The bidding is usually very rapid. The buyer, by a wave of his catalog, by spoken words, by a nod, wink, sign, or any other means or communication, may indicate his willingness to pay the price being cried by the auctioneer.

### Basis for Bidding on Package Goods

On package goods, as a general thing, bids are taken on the basis of an increase of either 5 cents, 12 ½ cents, or 25 cents on each bid. On deciduous fruit the bidding is on a 5 cent basis in all auction markets. This basis is used on citrus fruit outside of the New York market. In New York, because of the large volume of citrus fruits sold at auction (approximately 17,000 cars in 1921), the bids are increased on a 2 ½ cent basis. At times, on a strong market, a 25 cent basis may be adopted, particularly in the sale of foreign grapes. On products which sell by the pound, the basis is one cent or a fraction thereof.

### What The Auctioneer Says About Goods

Excessive praise of particular lines is very rarely resorted to as any statement about goods or any method of comparison that might be regarded as depreciating other lines in the sale would bring criticism and would reflect upon the salesmanship of the auctioneer. Absolute impartiality, or at least an appearance of it, is essential to the highest success.

When the bidding has run its course, the goods are "knocked down" to the highest bidder, and just as soon as the auction sheet upon which the line occurs is sold out, delivery begins.

### When "Bidding In" is Practiced

The layman generally thinks of goods offered at auction as being sold without opportunity for withdrawal or without recourse in any way. This is not the case.

A receiver may have instructions from his shipper not to sell a given lot offered under a certain price. If that price is not reached in the bidding, the representative may bid the shipment in at the price fixed by the shipper or at any lower price that will result in its being knocked down to him.

While such a practice has possibility of abuse, it also seems necessary to have some such practice to protect the shipper and give him some voice in the sale of his product.

Auction companies that buy and sell speculatively and others may upon occasion, where the rule permit it, simply order the withdrawal of lots from sale if the prices are unsatisfactory. They must then either be put over to a subsequent day or sold privately.

### How Returns Are Made to the Seller

As soon as the delivery of a shipment is completed, account sales are prepared by the auction company for the shipper, showing the number of packages received, number of packages sold, the price at which each line sold, returns for broken and coopered packages, and the charges made for the selling service. Some auction companies return a brief account sales, accompanying it with a copy of the price-realized catalog, which gives the selling history of the product after it reaches the company's warehouse.

It is the general practice among the auctions to remit for all sales within 24 to 48 hours after the sale has been completed. As many of the auctions allow a limit credit period to those buyers who have

made the proper showing, these early remittances mean that the auction company must guarantee the buyers accounts and pay out the money before it is received. This is termed "discounting" the sales.

### The Price-Released Catalog

It is a common custom of auction companies after the sale to reprint the catalog, adding the price received for each line. This is important because it affords complete publicity and guarantee to the seller and the buyer of the truth as to the prices at which the commodities were exchanged.

There is no essential difference in appearance between the price-released or realizer and the sale catalog except with respect to the addition of the price.

### Additional Price Publicity

In New York a daily called "New York Daily Fruit Reporter" prints a sales bulletin covering all the sales at each of the four New York auctions. This sheet is open for subscription and is thus available to everyone interested in the New York auctions.

Not only does this bulletin perform all of the combined functions of a price-released catalog, but it gives additional important information concerning the number of cars sold, market conditions, receipts, average range of price, conditions in other markets and at shipping points, and announcements of time, place, and commodities to be sold at future dates.

One page of this bulletin is devoted to advertisements of auction receivers.

### AUCTION COMPANIES FINANCE SHIPPERS AND BUYERS

The financing function of auctions is of two general kinds:

1. To growers or shippers in the way of direct cash advances against expected future shipments
2. To buyers in the form of credit for varying periods of time, as already discussed

The funds for loans made to growers and shippers may be obtained either from the operating capital of the auction company, or from funds borrowed from banks upon the note, or other security of the auction company.

### COST OF SELLING AT AUCTION

In the marketing of all fruits and vegetables, there is a considerable series of charges that are unavoidable. Not all of them apply to any individual transaction except in extreme and untypical cases.

For instance, we might begin with the first charge of the growers' exchange and build up the following list of market selling costs:

1. Growers' exchange charges
2. Marketing agency charge (when a selling agency is employed)
3. Transportation charge
4. Commission charge (auction)
5. Terminal charge
6. Unloading charge
7. Inspection fees
8. Cartage charge
9. Storage charges
10. Miscellaneous labor (coopering, conditioning, displaying samples, and so on)
11. Docking charge
12. Cataloging or advertising (in some cases)

The foregoing is not submitted as a complete list of possible charges and some items include several component parts. For instance, transportation includes not only the freight and refrigeration charges, but also, in such cases as the items lie, demurrage, trackage, switching, and other similar charges.

Cartage is an item largely beyond the control of any marketing agency, particularly in New York City, as cartage rates are based upon uniform schedules usually agreed upon en masse with the labor unions in the trucking business.

When the icing is necessary to preserve the product after the car has been delivered to the receiver by the railroad company, such charge is a separate item of expense and is billed against the owner of the product.

The question of cartage charges, which is important, is sufficiently covered in previous paragraphs.

Terminal charges occur usually only in those cases in which the railroads do not unload the cars, and this is a question that depends upon their published tariffs.

### The Selling Commission

Generally speaking, it may be said that the actual selling commission ranges in the various auction markets of the country from  $1\frac{1}{2}\%$  to as high as 7%. The low rates are dependent both upon volume, cost of selling, and the ordinary size of selling units. The highest rates relate to products sold with greater difficulty or products offered in small quantities.

The items, in addition to the actual work of selling usually covered by the commission charges, include advertising, delivery at the warehouse door, cataloging, guaranteeing credits when time is

given to purchasers for making payment, and discounting sales, which is the term technically applied to paying the shipper for his goods before the money has been collected from the buyer.

In general, the rate of charge in the eastern auctions is less than in the western auctions, and also on an average is smaller in those handling large quantities of goods than in those handling lesser quantities.

### Incidental Expenses

When storage accrues against a shipment, it is usually billed separately and billed at the amount actually paid to the cold storage company in whose custody the commodity was placed, plus any necessary labor for rehandling by the auction company.

### Summing Up the Charges

As stated before, auction commissions range from  $1\frac{1}{2}\%$  to  $7\%$ . The great bulk of sales fall in the range of 2,  $2\frac{1}{2}$ , 3, and  $3\frac{1}{2}\%$ . The shipper pays the auction receiver usually  $5\%$  for selling fruit and  $7\%$  for selling vegetables. Out of this the auction receives pay the auction charge, which averages from 2 to  $3\%$  out of the 5 to  $7\%$  collected by him, thus leaving the auction receiver from  $2\%$  to  $4\%$  for expenses and profits.

Citrus fruits, which represent the largest volume of a single class of commodities, usually are sold for the lowest selling commission. In Pittsburgh, the commission charge for those persons who sell their receipts through the auction is  $2\frac{1}{2}\%$  of the gross sales.

### PUBLIC CONTROL OF AUCTIONS

Competition is not, of course, relied upon wholly to correct the abuses when any rise in the conduct of auctions. They are usually under

state and municipal regulation. The auction companies themselves are usually required to take out licenses and are confined to those activities recited in their character or articles of incorporation.

Auctioneers are licensed and their conduct is subject to police powers. The fee for licenses ranges from a few dollars to as high as \$500.

### **AUCTIONS AT COUNTRY POINTS**

In a few sections, and in the case of a few crops, sales are made on the auction block at county shipping points. This is particularly true in Delaware and on the eastern shore of Maryland in the case of strawberries. Almost every really important strawberry shipping point in that territory has an auction there, during the season, the farmer daily sells his wagon supplies to assembled buyers at auction. These buyers are of many kinds; direct representatives of car-lot shipping organizations, of commission merchants, of wholesalers and jobbers, buying brokers, and others.

Auction sales of strawberries are also held in the North Carolina, Louisiana, Missouri, and Tennessee districts, noticeably at times when the market is strong. But as yet there is a lack of cooperation among producers organizations which is essential to successful public selling.

It does not seem likely that the auction method can be extended satisfactorily to many local points. Nevertheless, it is important and is worthy of consideration in territories where it may promise better results than selling methods that may be available.

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### **HOW TO INTERPRET REPORTS**

The reports of crop conditions and the reports of prices and market tendencies are of little value unless they can be properly interpreted.

It is not so important to know what the price is today, as it is to know what the price will be when your shipments arrive. Consequently, the use of market reports must be a basis for estimates of future conditions.

Probably the ability to make accurate estimates is one of the most difficult to acquire. Yet, it becomes simple when you understand how reports are made and when you understand what has happened in past years as the result of certain conditions.

While the man with long experience should be better able to make accurate forecasts, still it is entirely possible for a careful student to become proficient in a short time by studying the next few lessons, which are devoted to this subject.



## GLOSSARY OF MARKETING TERMS USED IN THIS LESSON

auction block. The table or desk back of which the auctioneer stands.

auction catalogue. Sometimes called "program of sales." A printed document containing a list of the articles to be sold, together with information about them.

auction clerk. One who keeps a record of the sales made at an auction, recording the price and the names of purchasers.

auction receiver. One who represents the owner of goods at an auction sale, and who looks after the transfer of the goods from the carrier to an auction rooms, as well as other details in arranging for the sale.

auction selling plan. A room in which an auction is held; usually seats are arranged so that every one present may have an unobstructed view of the auctioneer.

auction sheet. Same as auction catalogue, which see.

bid-in. To outbid a genuine purchaser on behalf of the owner of the goods when the price offered for property at auction is below that at which the owner is willing to sell; sometimes the owner himself bids in his own goods. The effect is to withdraw the goods from the sale.

bona-fide. In good faith, without deceit.

"under the hammer." At auction. Instead of saying "sold at auction," the phrase is used "sold under the hammer."

Credit buyer. One who buys on credit.

defaulting buyer. A successful bidder at an auction who does not accept the goods and pays for them afterward.

discounting sales. Paying the shipper for his goods before the money has been collected from the buyer, a practice followed by some auction companies.

**display room.** A room in which the goods to be sold at auction are displayed to the buyers.

**fruit auction.** A place where fruit and vegetables are sold at auction; or a company that conducts such an auction.

**hand-of-bananas.** A group of bananas arranged together on the stem. A "hand" usually includes about 10 or 12 bananas.

**knock down.** To sell. A term used at an auction to indicate that the last bid has been accepted as a purchase by the auctioneer.

**line.** (of goods at an auction) A group of goods of the same kind and quality to be sold as one item in an auction sale. Sometimes, however, a bidder may have the privilege of accepting all of the line or only a part of it as he may decide after his bid has been accepted.

**line-up a shipment.** To arrange products for display. Goods to be sold at auction are arranged for convenient display in the display room of an auction company; in other words, they are lined-up for the buyers' inspection.

**mark.** A group of packages of the same commodity and of the same grade grouped together for convenient selling at auction.

**part of marks.** Those packages of a group of fruit or vegetables to be sold at auction which are opened so that the buyer may inspect the contents.

**price-released catalogue.** Sometimes called "realizer." A catalogue of the articles sold at an auction sale, together with the prices.

**principal.** n. A man or concern whom a broker of other agent serves.

**relief auctioneer.** An auctioneer who serves when the principal auctioneer wishes to be relieved.

**renewed call.** The offering of a part of a line that was not taken by the first successful bidder. The bidding on a renewed call is conducted just as though the article offered were a new line.

## QUESTIONS FOR LESSON 9

As soon as you have mastered this lesson, answer these questions and submit your answers to The American Institute of Agriculture, Chicago, Ill., for grading or correction.

Do not fail to write your name, address, and matriculation number plainly on each set of answers you send. Be sure to give the number or letter of the lesson, and the number of each question answered. Write the question in full before writing the answer. Be brief and explicit. Confine your answer to the length indicated, if possible. Use a typewriter, if you have one.

Answer all questions. If any are omitted, the omission will count against you.

- I. How many cities have fruit auctions?
- II. Name the five cities handling the largest amount of fruit and vegetables throughout the auctions for the year of 1921.
- III. What portion or per cent of the total population of the United States live in the 14 cities having fruit auctions, according to the census of 1919?
- IV. What portion of the total fruit sold in the United States is sold at auction?
- V. About how much did the quantity of fruit and vegetables sold through auctions increase during the five years ending 1922?
- VI. Name at least five fruits that are handled at auction in important amounts.
- VII. Name at least three vegetables that are sold at auction in important amounts.
- VIII. About what percentage of the bananas brought to New York and Baltimore by importing companies is sold at auction?
- IX. Give one reason why strawberries are not commonly sold at auction at central markets.

- X. Name the two most common types of middlemen who look after the selling of fruits and vegetables at auction as representatives of the shippers.
- XI. What is a display of "parts of marks?"
- XII. What information does an auction catalog contain about the products offered for sale?
- XIII. What is a "price <sup>realized</sup> released catalog?"
- XIV. What fruit is sometimes sold at auction at the shipping point instead of at the central market?





# What Influences Prices of Fruits and Vegetables

BY CHARLES J. BRAND

*and*

# How to Interpret Market Reports and Statistics



MARKETING FRUITS AND VEGETABLES

LESSONS 10 and 11

Confidential Edition

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CHICAGO





H. E. ERDMAN  
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RURAL INSTITUTIONS  
UNIVERSITY OF CALIFORNIA  
BERKELEY, CAL.

### HOW TO STUDY THIS LESSON

Above all, keep in mind as you study these lessons, that the selling of fruits and vegetables, the same as the selling of other products, is a matter of dickering between buyer and seller.

A buyer, examining a crate of cabbage, may ask the commission man or wholesaler the price. The seller may reply, \$4.50. Because of his bartering instinct, the buyer may say, "\$4.50? I have got a quarter but not a half." That means he is willing to pay \$4.25.

If there is a big supply of cabbage and the demand is not active, the commission man may decide to take the buyer's offer. If he does, it is quite likely that he will have to sell a good deal of the cabbage he has on hand at that reduced price.

And so it is that the effort of the buyer to purchase at a lower price and the effort of the seller to get a higher price, results in price changes. The willingness of the buyer to pay more or the willingness of the seller to accept less, however, varies according to conditions.

This lesson takes up a study of these conditions. A thorough understanding of them and the influence each one exerts, is important to anyone who would be proficient in marketing.

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## WHAT INFLUENCES PRICES OF FRUITS AND VEGETABLES?

BY CHARLES J. BRAND\*

Why don't I get more for what I ship?

There are a million answers to that question. In many cases the reason is that the producer has failed to do some part of his work as he should.

Most of the other lessons in this course treat of the work of the producer in preparing his products for market and sending them to the right market. This lesson treats of those price control factors over which the individual producer has comparatively little control.

These factors are summed up in the two words, "supply" and "demand". The supply that influences the price of what you sell is made up of the shipments from all producers. The demand is made up of the desires of all consumers.

What influences supply?

What stimulates or decreases demand, and how can we take advantage of changes in demand?

These are the principal questions answered by this lesson.

You must recognize at the outset that, largely because of the perishable nature of fruits and vegetables, their prices fluctuate quickly in response to even the slightest variations of supply and demand. Consequently, it is important that all shippers and market men keep themselves informed of every detail that has to do with the change in supply and demand. Knowing the changes and prospective changes, shipments can be routed or diverted accordingly.

\*Formerly vice-president American Fruit Growers Inc. For complete statement of his experience, see Lesson 1.

It may be said, therefore, that market news in its broadest sense, is the most important factor in regulating supply to meet fluctuating demand.

### THE INFLUENCE OF VARIATIONS IN SUPPLY

Assume that there are on track in a certain city, 70 unbroken cars of Imperial Valley cantaloups, and that the normal demand of the city is 10 cars per day. Thus the city has a week's supply on track.

Assume also that there are 140 more cars rolling to the trade in this city from the various California shipping points. In other words, there is a two week's supply en route. It takes 11 or 12 days to transport the fruit from the point of production to market.

All shipments are made in refrigerator cars, but at that, if the crop is being harvested properly to get good sales results, it is not picked until it will be at the right stage or ripeness to be palatable on the date or at a very few days after the date of arrival.

If 70 of the cars rolling are diverted, the price level during the week will remain practically stable because there is just enough on track to meet the demand.

If none of the rolling cars are diverted, it will be inevitable that prices will drop. It is unlikely that the oversupply can be sold even at lower prices, soon enough to prevent deterioration and loss of part of the supply.

If production point supplies are diminishing and diversions take place, there will probably be a gradual rise in the price as the week progresses. This may not and generally will not be the case if competing products used as breakfast or desert fruits (such as strawberries, oranges, or peaches)

appear in the market in unusually large quantities and, consequently, at relatively low prices. In such a case, cantaloupe prices in the illustration that we are pursuing are likely to recede despite the probability that shipments will not hold up.

Although the cars are kept under ice in the railroad yards, cantaloupes soon reach a stage of ripeness which makes it imperative that they be sold and put into immediate consumption lest decay progress to a point where a price sacrifice is forced upon the owner of the goods.

### Temporary Glutting Lowers Prices

When one or two holidays come in a week, there may be a temporary glut of fruit and vegetables. It has sometimes happened that in cities where the hucksters are largely of a single religious denomination, church holidays have broken markets to such an extent that subsequent recovery was difficult. Continuing bad or unseasonable weather frequently has produced results of a similar kind.

### Regularity of Supply Stabilizes Prices

Stability of the market, dependent largely upon the regularity of supplies reasonably adjusted to consumptive demand, is a very important factor in elevating or reducing prices. Unstable markets create hazards which the business man dislikes to assume, unless there is a good possibility of making a relatively high profit.

Fluctuating supplies with unstable market conditions produce alternate gluts and famines which are now much less common than they were a few years ago when accurate and prompt market news was so much more difficult to secure and was possessed by only the larger and more favored distributors.

Now a market found to be glutted is avoided by shippers because of the relative certainty of loss.

However, this action goes from one extreme to the other due to ignorance and imperfect distribution. First, overshipment takes place then supplies are withdrawn, and there is a severe scarcity.

### Orderly Distribution Avoids Price Decline

Scientific distribution is a powerful factor in its affect on prices. If Chicago, the Twin Cities, Des Moines, Kansas City, Omaha, and St. Louis are receiving the proper proportion of supplies of each of the perishable products, prices in those markets will be lower than if Minneapolis and St. Paul, St. Louis and Chicago have too large supplies while supplies are insufficient in the other markets.

War time control of distribution brought out facts of this character with unusual emphasis because then, for the first time, agencies existed with the power to control distribution on a large scale.

### Good Appearance and Quality Demand Higher Prices

A preponderance of high quality goods always affects the general situation to the advantage of shippers.

A recent illustration of the ill effect of too many low quality goods upon a market came to my attention during the month of April in connection with South Carolina shipments of green peas. On a certain day, carload quantities of green peas were bringing \$3.50 per 5/8-bushel hamper in New York. These peas were shipped under ice, were properly packed at production point, and handled in carload quantities.

On the same day, small express shipments in New York from South Carolina in 5/8-bushel hampers, brought as low as \$1 per hamper. The only reason for the difference was the low quality of the miscellaneous express lots. The variety of peas

in both cases was the same. In some cases, the point of production was the same.

The difference lay in the fact that small, unequipped growers shipped peas that were over-mature, that were ungraded and that instead of going under ice as soon as picked, went into hot express cars for a three to four day journey to market. Out of a total express shipment of 179, 40 hampers were examined, and not a single sample showed peas of proper shipping quality. All were over-mature.

### The Affect of Packing and Packages

Packing and packages also play an important part in relative prices. A jumble-packed box of apples, even though the apples themselves be of equal quality, never brings the price that a well packed box does.

Old baskets, crates, bags, and hampers, even though the product within them be of excellent quality, frequently cut from 25 cents to 50 cents per package from the value of the product.

I have seen peaches in old crates from the same packing house bring 25 cents per crate less than the same fruit in new, well-appearing crates.

### THE INFLUENCE OF VARIATIONS IN DEMAND

Advertising, to which separate lessons are devoted, likewise is of the greatest importance in its general affect upon price. In the first place, it is the greatest single sales force that is available for encouraging people to buy more of products of any kind. Its educative influence creates intelligent demand, and particularly in the case of perishables, affects prices most powerfully.

### Advertised Brands Build Up Demand

It is frequently stated by experienced distributors that advertised brands of apples, such for

instance, as the well known SKOOKUM apples, bring an average of 25 cents a box more than the same varieites packed under other brands that have not had the benefit of advertising.

The well known BLUE GOOSE fruits and vegetables advertised and distributed by American Fruit Growers Inc., almost invariably bring better prices than the same qualities distributed under brands that have not been advertised either to the trade or to the consumer.

### AFFECT OF PRICES ON SUPPLY

Not only does supply affect prices, but, naturally, prices affect supply. The immediate affect on supply of rising prices often seems very great. It cannot however, create additional supply within a given crop period. So many acres are planted; no more can be harvested.

There are, nevertheless, certain things that can be done to add to the amount available for shipment to market of a partly or completely produced crop. Further cultivation or irrigation may help the yield, and so may the application of nitrates or other quickly available fertilizer to the already growing crop. More careful thinning may be practiced, or the quantity may be increased at the expense of quality by ommitting thinning altogether.

Higher prices stimulate greater care in harvesting and handling and thus result in a larger proportion of a crop being placed on the market.

### How High Prices Increase Supply

A further immediate affect of high prices is to call into the great consuming markets, products from more distant growing sections. When Long Island, Kaw Valley, or Eastern Shore potatoes are in short



supply, eastern markets will receive more shipments from California, Washington, and other relatively distant points, including overseas countries like Denmark and Scotland when there is a surplus there and tariff barriers are not too high.

When our onion crop is small and prices high, we sometimes receive shipments from the Canary Islands, although other factors also play a part in this.

Two things play a very important part in the consumer's willingness to pay high prices. First, and most important, is the question of whether he has the money. This depends on business conditions. The other relates to the consumer's thoughts. If he feels that the price is too high and altogether unreasonable, he may absolutely decline to buy even though he has the means of purchasing.

### High Initial Prices Stifle Demand

The American Cranberry Exchange of New York has kept better records of its crops and price experiences than almost any other industry, except possibly the California citrus industry. Cranberries are produced in a few restricted areas. A major part of the crop is distributed through a single organization, affording unusual opportunity for reliable statistics.

In the annual report of the American Cranberry Exchange for the crop season of 1921, the fact is demonstrated that through a period of 15 years, unit prices have been governed absolutely by production. High production meant low unit price; low production meant high unit price; and average production, average prices.

This close interrelation is due, in part, at least, to the fact that the exchange management is closely studious of and very sensitive to price

reactions of all kinds. Experience of other years showed the management that a high price when the season of shipment began, tended to reduce consumption immediately and to "back up" supplies, leaving unsold berries on hand to be disposed of at a loss.

### Cumulative Effect of Advertising on Prices

Intelligent advertising over a period of years in the case of the Cranberry Exchange is gradually producing a condition where, in spite of production above normal, prices range above instead of below normal. For instance, the size of the 1919 cranberry crop was 20% above the average of 15 years. The price, however, instead of being below the average, was 10% above the average price. On the other hand, the 1920 crop was about 7% below the average in production, whereas the price was 50% above average.

In 1921, with a crop 20% below the average, the per unit price was 200% above the average. It might be added that the total money value of the short crop of cranberries in 1921 was 50% greater than the average value of the crops of the 15 years from 1907 to 1921, inclusive.

### Weather Affects Demand for Many Fruits

Weather has a broad general affect on markets both at point of consumption and at the point of production. It not only facilitates or impedes harvesting, loading, and shipping, but it slows up sales and deliveries in the markets.

Furthermore, it creates or retards demand for certain products during certain seasons. Warm weather increases the demand for lemons, cantaloupes, strawberries, and peaches. But warm weather retards the demand for many of the acid fruits. Cold weather, on the other hand, increases the demand for acid fruits such as apples, pineapples, cranberries, oranges, and the like.

### High Retail Prices Discourage Demand

Consumer demand is greatly reduced when retailers charge prices known to be grossly out of line with wholesale prices.

Two illustrations may be cited as showing how, upon occasion, retail prices may be altogether out of proportion to wholesale prices:

In the early spring of 1922, a well known brand of popular variety of boxed apples was being sold at wholesale in Norfolk at \$4.50 per box. At the same time, in a number of retail fruit stores in Norfolk, the identical brand was being sold at retail for \$9 per box.

### High Melon Prices

During the season of 1921, California produced and shipped an unusually generous supply of Cassaba melons. Crates contained from 7 to 12 melons each. At wholesale, distributors were selling in both jobbing and car-lot quantities at 75 cents to \$1.50 per crate.

Retailers whose shops I observed in Atlantic City were selling the individual melons for from 50 cents to 90 cents apiece, \$6.00 to \$6.30 per crate. At one of the great New York hotels where I stopped at this particular time. I was charged 60 cents for one slice, which was about one-fifth of a melon, about \$21 per crate! This lack of relation between producer and consumer prices is one of the most serious drawbacks to the increase of consumer demand.

### How Much High Prices Reduce Demand

Some years ago the General Manager of the American Cranberry Exchange, in order to determine the danger created by high prices, made an investigation through 200 retail dealers. The result of his study indicated the following:

An advance from 8  $\frac{1}{3}$  cents to 10 cents per quart reduced sales 12%

An advance from 10 cents to 12  $\frac{1}{2}$  cents per quart reduced sales 23%

An advance from 12  $\frac{1}{2}$  cents to 15 cents per quart reduced sales 37%

An advance from 15 cents to 20 cents per quart reduced sales 67%

This investigation was made in the year of 1912. In more recent years, particularly during and since the World War, the American consumer has come to the point where he pays 20 cents and even 25 cents and 30 cents per quart for cranberries as willingly as in former times he paid from 10 cents to 12 cents.

When the price of the short 1921 crop was arranged in October, it was fixed at 25 cents and the whole crop moved into consumption without the slightest hesitation on the part of the consuming public.

### PRICE STIMULATION BY OTHER INFLUENCES

The most widesperad form of legislation, naturally, that affects prices is the periodical legislation by Congress fixing tariff schedules. This whole question is so extensive and technical that no attempt will be made to discuss it in this lesson. It is of relatively less importance in the case of fruits and vegetables than in the case of other agricultural products.

#### How Legislation Influences Prices

It is quite important in the case of the lemon industry of California because of Sicilian competition. Nevertheless, too great tariff protection is a great menance to the success of the lemon industry of the United States because it encourages overplanting. The artificial aid of the tariff in

maintaining prices keeps out Sicilian lemons and raises the general price level.

Another illustration of the affect of legislation on the price of perishables relates to grapes. The passage of the prohibition amendment to the Constitution very greatly increased the price of grapes, both juice and table varieties, in some cases 200% to 300%.

#### Price Stimulation by Car Shortage

A frequent cause for temporary elevation of prices is a shortage of refrigerator cars or a mistake in the distribution of the available supply. There are ample illustrations of temporary increases of considerable amount in the price of peaches, cantaloupes, grapes, strawberries, and other perishable products for no other reason than a purely temporary shortage of refrigerator cars.

To an extent, this elevation of prices is warranted by reason of the fact that, in case of most perishables, those quantities ready for shipment at a given time but not shipped at that time, go out of condition so quickly that they are not fit for subsequent marketing. This is particularly well illustrated in the case of peaches and cantaloupes. Those ready for picking today cannot be safely shipped day after tomorrow, particularly under average refrigerating and icing conditions.

#### Price Stimulation By Low Priced Sugar

In a year of plentiful fruit supply with high priced sugar, there is usually very little demand for fruit for canning and preserving. On the other hand, in years of low priced sugar, even with short crops of fruit, housewives and commercial canneries take so heavy a proportion of the crop as to greatly increase its total value.

#### High Freight Rates Reduce Returns

Farmers are very adversely affected by high freight rates. Every increase in freight rates

reduces the farmer's earning by the amount of the increase. How immediately this is true can be seen by considering an individual sale.

On a certain Monday morning in the spring of 1920 when The American Fruit Growers Inc., was shipping great quantities of cabbage from its own vegetable gardens at Sanford, Florida, I received two accounts of sales from Pittsburgh, each car containing 400 hampers. They sold at \$1.10 per hamper, or \$440. per car. Our selling charges were \$22.50 per car. The freight charges were 416.65 leaving a net return to the producer of 85 cents per car to cover his whole season's work of production, purchase of package, harvesting and so on.

There can be no doubt in all cases of this kind but that the producer pays the freight. The first deduction from the proceeds of his sale is for freight. Furthermore, if the carrier is in doubt as to its ability to collect freight charges at destination, it requires them to be prepaid, or requires a bond to be given by the shipper to insure payment.

The ultimate affect of high rates is to disarrange producing areas, disturb production plans, and discourage production until a balance is found between price and cost of production that will encourage farmers again to produce a certain crop. This takes a period of years and the ultimate affect in this case is to shift the cost of the freight gradually from the soulders of the producer to those of the consumer.

#### HOW TO TAKE ADVANTAGE OF CHANGING CONDITIONS

The small shipper will always have difficulty in taking full advantage of changing conditions unless he pools his shipments with those of others. In the lessons on cooperation which follow, you will learn how combining the shipments of many ship-

pers make it possible for experts to be employed to govern the supply on each market to fit the existing demand.

These experts can be employed by farmers collectively, but their conscientious service is difficult to secure by farmers with only small quantities to ship. This is due to the fact that most distributors who handle small shipments have sales forces in only one market, and so, for their own benefit, endeavor to sell all of the produce that is consigned to them on this market. Thus they have no opportunity to divert shipments to prevent a glut.

Cooperative marketing has far greater opportunity to stabilize prices by orderly distribution. It is important for every person interested in any way in marketing of fruits and vegetables, to understand the influence of supply and demand as described in this lesson. But when it comes to taking advantage of changes in supply and demand, this can better be accomplished through cooperation or by some other means of large scale distribution.

### HOW PRICE IS DETERMINED

Why is it that when two men get together with opposing ideas as to the value of certain products, they may eventually complete a transaction?

What causes them to yield to each other's convictions?

Why is it that a trader may be bearish one minute and bullish the next?

In other words, what is it that finally determines the price at which perishable products will be sold?

You must admit that these questions represent one of the most important problems in the marketing of fruits and vegetables. You will, therefore, be particularly eager to receive the next few lessons, which fully discuss the subject of price and price determination.



## GLOSSARY OF MARKETING TERMS USED IN THIS LESSON

divert, v. To change the destination of a shipment of goods. When goods are consigned with the privilege of diverting in transit, the shipper has the privilege of changing the ultimate destination at any time before it arrives at its original destination.

jumble pack. An arrangement of fruit or vegetables in a package without any apparent system.

roller, n. A car in transit. The term usually implies that the load has not been sold and that the shipper is endeavoring to sell the goods while in transit.

tariff barrier. A deterrent affect upon the importing of certain products brought about by a tax upon such products by the federal government, which tax is known as a tariff.

tariff schedule. The list of amounts that are to be charged on various commodities when imported, which charges are imposed by the federal government and which, together, are known as the tariff.

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Note: This is part of the Marketing Dictionary supplied with this course.

**QUESTIONS FOR LESSON 10**  
**MARKETING FRUIT AND VEGETABLES**

As soon as you have mastered this lesson, answer these questions and submit your answers to The American Institute of Agriculture, Chicago, Ill., for grading or correction.

Do not fail to write your name, address, and matriculation number plainly on each set of answers you send. Be sure to give the number or letter of the lesson, and the number of each question answered. Write the question in full before writing the answer. Be brief and explicit. Confine your answer to the length indicated, if possible. Use a typewriter, if you have one.

Answer all questions. If any are omitted, the omission will count against you.

- I. Why is it that the prices of fruits and vegetables fluctuate quickly in response to even the slightest variations of supply and demand?
- II. How does the ripening of cantaloupes, for example, in the railroad yards influence the prices to be paid for cantaloupes? (30 words)
- III. What one condition in supply is likely to have the greatest influence on the stabilizing of prices?
- IV. Just how will a big supply of low quality goods affect the prices on higher quality goods offered for sale at the same time?
- V. What affect on supply do high prices usually have?
- VI. If the price at the beginning of a season is too high, how is this likely to influence demand?
- VII. Name at least two fruits or vegetables whose demand is increased by warm weather.
- VIII. What general type of fruits are usually in greater demand during cold weather?
- IX. How will the shortage of refrigerator cars influence the prices of certain perishables?
- X. Why is it that cooperative shipments are more likely to have the advantage of local changes in supply and demand than the smaller shipments of individual growers?

## HOW TO STUDY LESSON 11

While conditions for marketing the various fruit and vegetable crops are somewhat different and each one requires special methods, the principles for interpreting the probable future of market prices are the same for all. This is fortunate, because otherwise a study of markets for perishables would be unusually complicated.

You will find the whole matter carefully analyzed in this lesson. And if you study with a conscientious interest in the subject, you will find yourself started in the habit of intelligently interpreting conditions by the time you have mastered this assignment.

This is one of the subjects that must be kept in mind continuously if you would benefit from it. What you learn today about interpreting reports will not be of very much value to you a year from now unless you make some use of it in the meantime. Even if you have nothing to sell for several months, it is important for you to continue to study the markets with the view of forecasting what is likely to happen.

It is unwise to use only the information published for one day or for one week as a basis for an estimate of the future. You must have a background. You must know what has happened in the past, not only in the past year but in the past decade. A study of markets must be a continuous process. This lesson will supply you the inspiration for this continuous study and also with a definite plan for the study.

The lesson has been prepared with the cooperation of government market experts, terminal market dealers, and practical farmers who have had experience in selling. It is, therefore, a combination of experiences that have been tested and proved reliable.

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## HOW TO INTERPRET MARKET REPORTS AND STATISTICS

Whether you are a grower, a local shipper, or a terminal market dealer, you should make a most careful study of the price tendencies and the conditions influencing supply and demand at the principal terminal markets.

Too often producers pay little attention to prices or conditions except those existing at their own local market. Such producers are almost sure to sacrifice at least a part of their crop at prices that might have been much higher if they had known the trend of conditions throughout the country.

Country shippers, for various reasons, often confine their shipments to one market. If they do not keep in touch with the industry as a whole, they often lose considerable amounts of money that might have been saved had a careful survey of all markets been made.

### Figures That Disclose Better Markets

For example, a peach grower living near New York had considered that he should ship everything to New York because it was his nearest market. However, he began to study the reports and statistics on the peach crop issued by the U. S. Department of Agriculture. From this study he learned that Pittsburgh quotations were consistently higher than New York, even taking the extra freight into consideration. After learning this, he consigned to Pittsburgh and realized several hundred dollar's per car more profit than if he had shipped to New York.

Similarly, an apple grower, whose nearest market was Boston, learned that he could ship barrelled apples in less than carload lots as far west as Minneapolis and secure more net profit than if he shipped to

Boston or New York. This is an illustration of the fact that there often exist discrepancies between markets that, if known, may result in great benefit to shippers.

The successful shipper seldom confines all of his shipments to one market, but keeps in touch with all prospective markets and stands ready to consign to whichever market offers the best chance for profit. In fact, such a shipper may divert shipment or change the destination of a carload after it is on its way.

It is also common practice, especially for the larger shippers, to start cars rolling in the general direction of the eastern markets without any very definite decision as to which market the car will finally reach. While the car is en route, conditions in all eastern markets are studied and the market that offers the best chances for a good price receives the load.

### TWO CLASSES OF PRODUCTS

It is interesting to know that this flexibility of consignment exists. But this knowledge alone is not likely to be of very much value to producers, shippers, or market men unless they know how to interpret existing conditions. It is the purpose of this lesson, therefore, to give you the instructions that will enable you to develop the ability to make wise decisions as to when and where to market to best advantage.

In studying this lesson, keep in mind that there are two general types of fruits and vegetables:

1. Perishables, such as peaches, strawberries, and lettuce
2. Semi-perishables, such as potatoes, oranges, apples, onions, and cabbage

Which Prices Fluctuate Most

It is plain that perishable crops must be marketed quickly regardless of market conditions. They cannot be held after they are ripe. Consequently, there is less opportunity for the careful selection of markets for perishables than there is for semi-perishables. Furthermore, semi-perishables may be stored for some time, and so the supply on the market may be adjusted to fit demand. Thus, there is less likelihood of violent and disastrous fluctuations in the prices of semi-perishables than there is in the prices of perishables.

This condition makes it more important to study local conditions on terminal markets with reference to perishable crops than with reference to semi-perishables. In other words, it is less important to know the total crop and the total shipments of strawberries than it is to know the total crop and the total shipments and the total storage stocks of potatoes or onions. When a car loaded with perishable fruits or vegetables arrives at Chicago, it must be sold there, as a rule. Even protected under the most favorable conditions, it would probably be badly deteriorated by the time it had been reshipped to another market.

On the other hand, if a car loaded with onions arrives at Chicago and the shipper finds a poor market due to local conditions, the onions may either be put into storage for a short time or the load may be reshipped to another market that seems to offer better conditions.

Perhaps this point may be still more emphasized by saying that in the marketing of perishable crops it is necessary to make a more intensive study of local conditions on the market to which you ship than when you market semi-perishables.

### WHAT INFLUENCES DEMAND

To develop the ability of interpreting markets, it is necessary to understand and to make a constant study of those factors that influence supply and those that influence demand. The demand for most fruits and vegetables is not uniform throughout the year. Habits of eating have been developed which result in some products being in much less demand at certain seasons, regardless of low prices which might be expected to stimulate demand.

In the same way, eating habits create a heavy demand at certain seasons for certain products which results in market men being able to sell large quantities, even though the price may be high.

This handicap in the marketing of some products is being overcome, at least in some cases, by educational campaigns. For example, people were formerly in the habit of using very few lemons during the winter. The summer time was the season when lemons were most in demand. Educational campaigns have changed these habits so that winter demand for lemons is now much larger than it used to be.

These educational campaigns usually consist of literature and advertising which suggest new uses for the product, or which suggest the more extensive use of the product in certain ways. It is quite likely, for example, that many more lemon pies are now made during winter than were made before the educational campaign was started. It is possible, also, that more lemons are used in garnishing meats in winter months.

There is much work of this sort yet to be done. Some products have not been included at all in these educational campaigns. But the success already attained with those crops that have been thus treated shows the possibilities of this method of stimulating demand.



The factors which most commonly influence demand may be listed as follows:

1. Weather
2. Price
3. Season
4. Eating habits
5. Educational campaigns
6. Manufacturers' needs
7. Competition between crops

### 1. The Influence of Weather

Weather has a great influence on the markets for fruits and vegetables. It influences both supply and demand. There are some fruits that suffer violent and disastrous fluctuations in prices within a few hours, due to a change in weather. In the same way, they may have violent and profitable reactions in prices, thus increasing the outlet for an over-supply and relieving an otherwise dangerous situation.

For example, it is common for the demand for watermelons or cantaloupes to drop to almost nothing within a few hours, when a radical change of weather occurs, and sharp price declines invariably result. These melons are in demand when the weather is hot. But just as soon as the weather turns cool, the demand falls off immediately. On the other hand, if the weather has been cool for a period and suddenly turns hot, the demand is promptly increased.

### 2. The Influence of Price

Price, in itself, has an important influence on market fluctuations. When prices have become unusually high, there is almost sure to be a reaction, with prices tending lower. In the same way, high prices have a tendency to reduce demand, other things being equal, where low prices have a tendency to increase demand.

You must remember, however, that no one influence is likely to be entirely responsible for an immediate change in demand. It is usually the average of all influences that brings about the change. For example, if prices have gone to a low level at the close of a normal consumption period of a certain product, the low level of prices is not likely to increase demand, because the other factor of eating habits is likely to be stronger and thus counteract the effect that would otherwise be expected from the lower prices.

In the same way, there might be conditions that offset what would otherwise be expected from high prices. Suppose, for example, that the high prices occurred in a period of unusual prosperity and at the beginning or near the beginning of the normal consumption season. The prosperity influence and the seasonal influence might together almost entirely counteract the influence of high prices.

### 3. The Affect of Season

People have developed the habit of wanting strawberries in the spring and early summer, and although strawberries may be available from ever-bearing varieties all through the late summer and early fall, the heavy demand usually falls off after the spring and summer appetite has been satisfied.

In the same way, cantaloupes have come to be an important part of the dietary only during warm weather. If cantaloupes were offered around Christmas time, there would be little likelihood of a sufficient demand, due to the fact that it is the off season, as far as people's appetites are concerned.

Bear in mind that this seasonal demand is gradually being modified and changed by educational and advertising campaigns. The usual purpose of such a campaign is to spread out the season of demand so that there will be a more uniform market for the crop.

#### 4. Changing the Eating Habits of Consumers

Perhaps one of the most outstanding examples of the demand for a product being increased by a consistent campaign to change people's eating habits, is the campaign inaugurated a few years ago by the raisin growers of California. Raisins were being produced in greater quantities than could be profitably sold. The men back of the cooperative raisin growers' movement believed that consumers could be educated so that they would change their eating habits and consume a much larger quantity of raisins.

The campaign was thorough, far-reaching, and gave immediate results. Now raisins are consumed in much greater quantities than formerly, and not only has the surplus of former years been taken by the market, but production has been enormously increased.

The same thing has occurred with other crops, such as oranges and prunes.

You will recognize that this influence on demand is felt over a long period rather than over a short period. That is, the change in eating habits does not occur from day to day within one season, but is rather a gradual change produced over a series of years.

#### 5. How Educational Campaigns Extend the Market

There have been times when growers have shipped the largest part of certain products to a few principal markets. Some markets have been neglected, probably due to the fact that there appeared to be no great demand and growers were not inclined to develop a demand.

It has been found, however, that most all markets may be prepared by educational activities to receive most any of our fruit or vegetable crops. A market that formerly consumed certain products in small quantities may become a more or less important

market when the products are thoroughly advertised to the consumers adjacent to this market.

By such methods, it has been possible for certain big shippers to increase their outlets from four or five markets to as many as 200 markets, or more.

#### 6. How Manufacturers' Needs Change Demand

In general, the development of a demand for products manufactured from fruits and vegetables has increased the manufacturing needs. There have been times when a manufacturing plant was used almost entirely to consume the surplus of a crop. But the energetic and consistent efforts to build up a greater demand for certain manufactured products has brought about a regular demand for certain crops from manufacturers.

Since the prohibition amendment went into effect, there has been an increased need for fruit juices and syrups, and these products have become much more important factors in the market.

The development of manufacturing methods and preserving methods has greatly increased the profit of strawberry growers. It is estimated by some that strawberry growers have made more money during the last five years than the growers of any other fruit.

Thus, it is important in determining the long-time trend of demand, to keep in close touch with the development of manufacturing industries that use fruits and vegetables as raw materials. Practically all perishable fruits are now in demand by manufacturers to a greater or less extent.

#### 7. Competition Between Crops

In forecasting the probable demand for one crop, you must keep in touch with the market on other crops. There are times when low prices of one fruit may increase its consumption to such an extent that

the consumption of some other fruit is greatly reduced. This may be a local condition on one market and may have an important affect. But the affect may be of short duration.

Sometimes this situation is brought about by energetic methods on the part of one or more wholesalers to push the sale of a certain product. The increase in sales of this product may decrease the demand for some other products.

### Balancing the Factors

It is important to emphasize again that in your study of demand you must keep all of these seven factors in mind. Study them together, get information from all sources, keep in mind that the market for fruits and vegetables is the nation as a whole, and endeavor to balance the probable influences of the different factors.

Don't get the mistaken idea that each factor should be given an equal rating. The factor of weather may have the greatest influence; the factor of price may have the next greatest influence. Some of the other factors may have such a small influence that at times they will show little or no affect on the market.

It would be unwise to give rules by which the influence of these factors could be changed. Such rules would be entirely unreliable because the influence of each of these factors is likely to change at any time, and does change from year to year. Thus, the only thing to do is to use your best judgment in estimating the importance of the factors that are exerting an influence on the market.

The market is never judged exactly the same by all dealers. If it were not for the fact that some dealers interpret conditions in one way and others interpret them in the opposite way, there would be no market. If both buyers and sellers believed that

the crop was so large that it could not possibly be consumed, they would all expect the market to go down.

This, of course, would result in consumers exerting a demand influence that would make it necessary for buyers to purchase. But the affect of the uniformity in opinion would be disastrous to the sellers.

In the same way, if both buyers and sellers believed that the supply was so small that the demand could not possibly be supplied, prices would go up to an unreasonably high level.

The effect of each one who has to do with the marketing of fruits and vegetables should be, therefore, to reach his own conclusion and to develop the ability of making that conclusion as nearly accurate as possible. He must expect, of course, to make mistakes occasionally, but the more times he can interpret conditions rightly, the more successful he is likely to be.

### Three Kinds of Markets

In studying the various markets, you must keep in mind that there are different kinds of markets. There are local markets, where fruits and vegetables can be sold only for local consumption. There are diversion markets, where the crops may be sold for local consumption or for reshipment to other points. There are final consumers' markets, where there is little chance of selling for reshipment.

In studying local markets, you will realize, of course, that the conditions existing in the country as a whole have some affect. However, local conditions have a greater affect here than in the other types of markets. Usually, these local markets do not receive either fruits or vegetables in carload quantities. Receipts are from nearby growers, who bring their crops to market in trucks or wagons.

An oversupply in one day may bring a serious drop in price, and an undersupply the following day may put the price either back to normal or above normal.

It sometimes happens that a grower or shipper may sell on a local market and also have opportunity to sell on a larger central market. This occurs when he has sufficient supplies available to ship in carload quantities. He will adjust the shipments according to his judgment as to the balance between local demand and nation-wide conditions. Some days he may sell all of his available supplies on the local market. Other days he may ship all of his supplies to a diversion market or terminal market.

### The Diversion Markets

The principal diversion markets for fruits and vegetables are: Chicago, Pittsburgh, Kansas City, Denver, Cincinnati, and St. Louis. Most of the southern crops are diverted either from Cincinnati or St. Louis, although some may be diverted from Chicago. Such cities as Minneapolis, and St. Paul are not diversion markets, due to the fact that diversion from those points would require an expensive back-haul on the railroads.

A diversion market must be so situated that the shipper may take advantage of the diversion privilege allowed by the railroads and the storage-in-transit privilege. These privileges are usually economies only when there is no back-haul, which, of course, must be paid for at a high rate.

It would seem quite obvious that when a diversion market is available, it should be used, because when products are shipped to a diversion market, there always remains the alternative of selling them on another market when conditions warrant. When they are shipped to a final consumers' market, such as New York, there is little chance of benefiting from favorable conditions that may exist at other mar-

kets. They must be sold at New York, regardless of conditions. This situation is partly offset, at least in the New York market, by the unusually large demand for local consumption.

### SUPPLY CONDITIONS THAT INFLUENCE MARKETS

The principal factors influencing the supply of fruits and vegetables may be listed as follows:

- |                   |                      |
|-------------------|----------------------|
| 1. Weather        | 6. Strikes           |
| 2. Price          | 7. Diversions        |
| 3. Storage stocks | 8. Orderly marketing |
| 4. Car shortage   | 9. Exports           |
| 5. Embargoes      | 10. Imports          |

#### 1. The Influence of Weather

Weather has, by far, the greatest influence on supply. The influence of weather is largely at the point of production.

Reports on the size of crops indicate the total crop in prospect rather than the total crop harvested. The crop in prospect is quite different from the crop actually marketed. It almost always happens that a part of the crop is not harvested at all and, of course, a part of the crop is consumed at the point of production. Consequently, the government reports on the size of fruit and vegetable crops are not in themselves adequate as a basis for estimating the supply at the market.

While the total crop has an important influence on the price for the season, it must be recognized that the supply at the market must be responsible for the daily fluctuations. Consequently, weather must be studied from the standpoint of its affect on the harvesting, keeping qualities, and marketing of the crop.



Suppose, for example, that an early frost should greatly damage a certain crop. This would result in the damaged part of the crop being left in the field. Thus, the supply for the country would be reduced. In the same way, rainy weather might greatly damage crops in the fall, and this would result in part of the crop not being harvested. Damp and muggy weather exerts an important influence on the shipment of such perishables as strawberries.

This question of the weather at the shipping point warns the shipper that he cannot send his fruit so far as if the weather were bright and the air clear. Thus, shipments from territory suffering from this unfavorable weather must be sold to nearby markets, which may result in a shortage on markets farther away. By keeping in touch with weather conditions, shippers may thus adjust their consignments to various markets, according to their judgment of receipts from other territories.

Unfavorable weather conditions in one territory, therefore may develop a benefit to a territory many miles away, or favorable weather conditions for shipment from one territory may result in unusual competition for a territory in another part of the country.

## 2. The Influence of Price

High prices, other things being equal, have a tendency to increase supply at consuming markets. Low prices, on the other hand, have a tendency to decrease supply. This is more true of semi-perishables. If a man has a carload of a highly perishable crop ready for shipment, it must go to market regardless of price conditions, and it must be sold when it arrives unless he is willing to take a total loss.

Thus, price condition has a smaller influence on the supply of perishables than on the supply of semi-perishables. If the price on cabbage takes a sudden

drop, those who have cabbage in transit or ready to ship may put their supply into storage until the price at market is more favorable. Thus, price on semi-perishables may be expected to exert a greater and a more prompt influence on supply.

### 3. The Influence of Storage Stocks

Even though the government does not supply regular and complete reports of fruits and vegetables in storage, storage stocks of such crops as apples, potatoes, onions, and cabbage have an important influence on supply. Dealers have ways of their own of learning approximately what quantity of each crop is in storage. It is true that their knowledge is usually in the form of estimates rather than figures, although rather accurate figures are available for apple dealers through their national association.

The supply available for the market is usually considered by dealers with this knowledge to be not only the cars offered for sale, but the additional quantity that may still remain in storage houses.

In considering the influence of storage stocks, you must remember that it is more common for fruits and vegetables to be stored near the source of production than in terminal markets. Perhaps the principal reason for this is that storage may be had at lower rates in producing sections.

Thus, these crops are stored in widely scattered locations. That is probably one reason why accurate figures are not available. It would be an almost endless task to gather information from these widely scattered territories.

Caution must be given again that in estimating the probable supply of crops in storage, every part of the country must be taken into consideration. Potato dealers often take trips through Wisconsin or some other state and too often allow their estimate of the whole potato crop to be based almost entirely

on the conditions in the one state they have visited. However, it is not at all unlikely for the situation in one state to be entirely opposite from the situation in another state.

#### 4. The Effect of Car Shortage

While car shortages do not occur very often, there have been times when the unusual demand from other industries for the use of cars has resulted in fewer cars being supplied by the railroads to fruit and vegetable shippers. If crops cannot be shipped, they cannot be marketed, at least not in terminal markets. Consequently, car shortage has the effect of reducing supply, and this usually increases the price.

#### 5. The Effect of Embargoes

The same effect is sometimes produced by railroads placing an embargo against certain products. Thus, in certain territories at least, the railroads may refuse to accept for transportation certain fruits and vegetables. This results, of course, in reducing the supply at market and usually that shows up in an increased price.

#### 6. The Effect of Strikes

Railroad strikes, either local or national, may result in reducing shipments. Sometimes they may reduce the supply on one market and increase the supply on another. Thus, prices may reach a point far apart on the two markets. For example, a railroad strike on eastern lines may reduce the supply on eastern markets. Shippers, however, having transportation available to the middle western markets may continue to ship and thus flood Chicago, Kansas City, and St. Louis, with the result that prices would go way below a profitable figure. The newspapers must be studied, therefore, for news of strikes and impending strikes.

### 7. The Result of Diversions

The report for today may show an oversupply of apples at Chicago. A part of this supply, however, is made up of apples still in the cars in which they were shipped. Because of the diversion privilege, a part of these apples may be reshipped to some other markets. And so when you interpret the probable effect on the supply at a diversion market you must take into account the possibility of some of the supply being sent on to other cities.

Thus, the total supply reported for a diversion market may appear to be far beyond the consumptive demand on that market and still may not result in any appreciable decline in price, due to the fact that no more is sold at the diversion market than the consumptive demand requires.

### 8. The Effect of Orderly Marketing

Orderly marketing is now practiced by big cooperatives and large-scale dealers. Orderly marketing consists in regulating the supply at the various markets by consigning only the quantity that is known to be in demand. Thus, oversupplies are less frequent and undersupplies seldom occur. The fluctuation in supply, at least on certain products, is, therefore, much less violent than formerly. And so the intelligent student of markets must keep abreast of the developments in orderly marketing.

### 9. The Affect of Exports

While exports of fruit and vegetable crops are usually not large, they sometimes exert an important influence on domestic supply. All students of markets must keep themselves informed on exports and on foreign markets, because there may be times when an unusual export demand or heavy export shipments may counteract some other market influence that would otherwise cause an important change in prices.

## 10. The Affect of Imports

The influence of imports is usually much more marked than the influence of exports. However, comparatively few fruit and vegetable crops are imported.

Imports of lemons are rather constant. They come largely from Sicily. Consequently, information regarding the lemon crop in Sicily and regarding the receipts of lemons from Sicily is the important source for estimates on the affect of imports of lemons.

Changes in tariffs, however, have an influence on these imports. When the tariff on lemons is high, exports are likely to have a tendency to decrease. When tariffs are low, imports are likely to increase. It is quite common to import onions from Spain and Egypt. And so tariffs on onions, and price and crop conditions in these two countries should be watched.

During the season of high prices, potatoes are sometimes imported from Denmark and from Great Britain. But this occurs only occasionally and only under the stimulus of abnormal high prices.

In the same way, a season of unusually profitable prices might draw cabbage from Holland and Denmark.

The interpreting of market prices on fruits and vegetables, therefore, resolves itself into a constant and careful study of the seven most important influences on demand and the ten important influences on supply. These 17 factors must be balanced from day to day in your own mind, because an accurate estimate must take into consideration all counter-acting influences.

Some dealers have the habit of basing action on the opinions of other dealers rather than studying conditions for themselves. This plan when used by itself is rather dangerous, because it is not usually

profitable to follow the crowd. However, it is important to know what other dealers think, because they are likely to buy and sell according to their own opinions. Excessive buying by a crowd of dealers, is, of course, sure to have some affect on the market. And excessive selling is also likely to have an influence.

Therefore, in addition to making your own estimates, you should learn as much as possible about the estimates made by others.

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### COOPERATIVE MARKETING

Will cooperative marketing become universal?

Is it possible for a cooperative association to perform all of the functions of marketing?

Does cooperation raise prices or lower them?

Just what is the process of organization that will make cooperative marketing successful?

These questions are asked hundreds of times, almost every day. There have been some good answers given to them, but many answers are not based on facts and are entirely unreliable.

In the lessons that follow, not only are authoritative answers given, but the facts given in the answers are supplied in such a clear way that you will be able to reach your own conclusion and to feel certain that you are right.

The study of cooperation is continued through the next six lessons, and you will find this study both profitable and extremely interesting.

## GLOSSARY OF MARKETING TERMS USED IN THIS LESSON

consumers' market. A city in which practically all produce is sold for consumption in the immediate vicinity, sales being made by producers or wholesalers either to jobbers or retailers.

consumptive demand. The needs of final consumers as reflected in the volume of buying by retailers and jobbers.

diversion market. A city from which products may be shipped to other markets and get the benefit of the diversion privilege and the storage-in-transit privilege. At such a market products have the benefit of the local demand, as well as the demand from other markets.

educational campaign. As used in this lesson, a definitely planned activity consisting in the dissemination of information which is likely to increase the use of a certain product. The information disseminated usually stimulates additional uses for the product.

embargo, n. Authoritative stoppage of the shipment of certain commodities.

orderly marketing. The consigning of shipments of products to the markets most in need of them. A general scheme of supplying principal markets with just the right quantity of produce to meet the existing demand, commonly carried out by large cooperative associations or large selling organizations.

outlet, n. As used in this lesson, a buyer or class of buyers for certain goods.

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**Note:** This is part of the Marketing Dictionary supplied with this course.

## QUESTIONS FOR FRUITS AND VEGETABLES LESSON 11

As soon as you have mastered this lesson, answer these questions and submit your answers to The American Institute of Agriculture, Chicago, Ill., for grading or correction.

Do not fail to write your name, address, and matriculation number plainly on each set of answers you send. Be sure to give the number or letter of the lesson, and the number of each question answered. Write the question in full before writing the answer. Be brief and explicit. Confine your answer to the length indicated, if possible. Use a typewriter, if you have one.

Answer all questions. If any are omitted, the omission will count against you.

- I. Name the essential difference between the marketing of highly perishable crops such as peaches, strawberries, and lettuce, and the marketing of semi-perishables, such as potatoes, oranges, apples, onions, and cabbage.
- II. Name the seven principal factors that influence demand.
- III. Give an example of how weather may decrease the demand for some fruit or vegetable within a few hours.
- IV. How does price influence price?
- V. How does the season of the year influence the demand for certain products?
- VI. How have the eating habits of consumers been changed? Give an example.
- VII. Why is it that it is usually unsafe to judge the market by the influence of only one factor?
- VIII. What is a diversion market and what are the principal diversion markets for fruits and vegetables?
- IX. Name the 10 principal factors influencing the supply of fruits and vegetables.
- X. What factor usually has the greatest affect on supply? Why?







# **The Principles of Cooperative Fruit and Vegetable Marketing**

**By C. E. DURST**



**MARKETING FRUITS AND VEGETABLES  
LESSON 12**

**Confidential Edition  
Issued for Members**

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**The American Institute of Agriculture  
CHICAGO**



THE MAN WHO CONDUCTS THIS LESSON



C. E. DURST

Mr. Durst is secretary of the Federated Fruit and Vegetable Growers, Incorporated, the largest cooperative fruit and vegetable marketing cooperative handling a variety of products. Indeed, he was one of the men who planned this organization and he worked out its fundamental policies.

Mr. Durst was a member of the committee appointed by the American Farm Bureau Federation organized to develop a national marketing organization. He is responsible for many of the policies that were put into the constitution that insured grower control.

During the time he was serving on this committee, he was also director of the Fruit and Vegetable Marketing Department of the Illinois Agricultural Association. In that work he organized a number of local fruit and vegetable cooperative associations, as well as the Illinois Fruit Growers Exchange. He operates a successful truck farm and has viewed marketing from every angle.

### HOW TO STUDY THIS LESSON

You have already learned the principles of cooperative marketing in general. This lesson will show you the application of these principles to fruit and vegetable cooperatives.

There are no essential differences in the principles followed by cooperatives handling different commodities, but there are variations in the application of these principles. It is these variations that are mentioned in this lesson.

For anyone who expects to be a manager, an officer, or even a member of a fruit and vegetable cooperative, these principles assume the greatest importance. If every member, and every officer, and every manager would follow consistently the principles here outlined, there would be fewer failures.

You will be surprised with the simplicity of what you find presented here. And after mastering the lesson you will wonder that any cooperative could fail to follow these few simple rules. You must keep in mind, however, that this information has not always been available to cooperatives. The author himself has made the statement that if he had known what is contained in the next three lessons when he began the work of organizing fruit and vegetable associations in Illinois, the knowledge would have been worth \$5,000 or more to the organization he served.

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# **THE PRINCIPLES OF COOPERATIVE FRUIT AND VEGETABLE MARKETING**

**BY C. E. DURST**

Our country is a comparatively young nation and the greater part of its development has taken place within the last hundred years. During that time we have built great cities, constructed tremendous railway systems, established thousands of the most modern industrial plants, founded great universities, schools, and churches, developed extensive mining properties, and advanced our agriculture in many ways.

## **WHY COOPERATION HAS GROWN**

In this period of evolution and growth, it is only natural that our development along various lines should be more or less out of proportion. The people interested in each phase of activity have advanced their interests as rapidly as possible. Some lines have developed quite rapidly; indeed, some of them seem to have reached practically a state of perfection. This may be because of the greater ability of their leaders, because of more favorable laws, or because the problems were less serious.

Along other lines, the progress has been slow, and in some cases the progress has been almost negligible. The interests which are now more or less poorly developed are having difficulties in solving their problems because of the opposition, unconscious or otherwise, of the interests which are highly developed.

## **Production An Individual Problem**

The production of agricultural products has always been, and probably will largely remain, a



problem of individual farmers. Until within recent years, farmers have attempted also to market their products as individuals. Under this method, conditions have gradually become worse.

Speculation has been encouraged; a wasteful, expensive, inefficient, and complicated marketing system, — or rather a lack of system, has developed. The spread in prices between the producer and consumer has been wide.

It is not surprising that the conditions surrounding the marketing of farm products should be as bad as they are, when you consider that our system has developed with practically no attempt at orderly direction by any agency, public or private. In order words, our marketing system has "just growed," like Topsy.

People, like animals, flock together when in trouble. The unsatisfactory conditions prevailing in the marketing of farm products have caused farmers in the last 20 or 30 years to associate themselves for the purpose of developing more orderly and efficient marketing methods.

### Cooperation Universally Recognized

Great progress has been made by some of these organizations, and as a result of their success, the cooperative movement is now progressing at a rapid rate. National and state laws have been passed authorizing cooperative organization and the public and the press join in conceding food producers the right to organize for market improvement. The movement seems to be taking on the character of a business revolution which bids fair in time to have a far-reaching influence on all business. For any movement which seriously affects agriculture, is bound to have an important influence on our whole national life.

### Fruit Growers Have Led in Cooperation

In no branch of agriculture has this movement been more successful than in fruit and vegetable growing. The perishable nature of the products, the great difficulties of transportation and refrigeration, and the problems of sales service, distribution, and advertising caused these growers to begin the organization of cooperative marketing associations earlier than any others.

When fruit growers began, they had no existing associations to pattern after, and they had no way of knowing the correct methods of organization or operation. They simply had the faith that somehow or other they could work out together, the problems they had utterly failed to solve as individuals.

Naturally, they made mistakes, but they profited by them and gradually determined the correct principles. To-day the experience of the fruit cooperatives is serving as a background for the entire cooperative movement of the country.

### BENEFITS OF COOPERATIVE MARKETING

In a general way, the cooperative marketing of fruits and vegetables can be divided into two main classes. One consists in the marketing of products grown at a distance from market and for which rail or boat transportation is necessary. The other consists in the marketing of products grown near market and which can usually be transported in wagons or trucks.

#### Marketing Products Grown a Distance from Market

It is in the marketing of products grown at a distance from market that the greatest advances in cooperation have been made. This is no doubt due to the fact that the problems have been greater. The growers as individuals have been wholly helpless in solving them.

The citrus growers of California were the first in the country to seriously consider the organization of a cooperative marketing association on a large scale. The conditions in their industry had gradually become worse until most of the sales were resulting in "red ink" (losses). About 30 years ago these growers began to organize. They had to learn the correct methods by experience, which is always an expensive teacher, though otherwise a good one.

Today these citrus growers have in the California Fruit Growers Exchange one of the largest and perhaps the most highly perfected cooperative marketing organization in existence. It has solved many of the great problems of the citrus industry, and now instead of the "red ink" sales, the growers are able to make a reasonable profit from their labors and investments.

At the same time, the Exchange has greatly benefited the trade and consuming public by its dependable methods of standardization, by its influence in stabilizing markets and prices, by its comprehensive distribution system, and by encouraging people to eat more fruit.

Information as to the specific benefits which growers have obtained from cooperative marketing will serve as a background for a study of the principles underlying the successful organization and operation of cooperative associations. The seven chief advantages gained through cooperative marketing are as follows:

1. Less Costly Methods of Handling Shipments
2. Less Expensive Sales Methods
3. Better Distribution
4. Products Standardized
5. Consumption Increased
6. Growers' Problems Solved
7. Supplies Bought to Better Advantage

### I. Less Costly Methods of Handling Shipments

Associations make it possible to assemble, grade, pack, load, and ship more efficiently and at lower cost.

In the first place, when products are handled cooperatively, it is a comparatively easy matter to make car-lot shipments. This saves freight charges, and enables the growers to make sales direct to legitimate car-lot buyers. When growers operate independently, they often have difficulty in loading full cars and must sacrifice their products to local buyers.

The work of handling products can be better systematized when it is done for a whole community. A community packing plant will cost less than a lot of small packing houses in scattered gardens and orchards, and community plants can be better equipped than the packing plants on farms.

A community packing house develops skilled helpers among many women and girls of the cities and towns who could not be induced to go out to the farms. Growers who do their own packing are forced to use more or less transient labor, and they usually are compelled to train a new set of workers each season.

The citrus growers of California have found it possible to pack and load their fruit for from 10 to 15 cents per box less than was charged formerly by private agencies, and the work is now better done.

Peach growers of southern Illinois have been able in community packing houses to pack peaches for from 5 to 7 cents per bushel basket, including the ring face, whereas the same work costs individual growers from 11 to 15 cents per bushel on the average and is not, as a rule, so well done.

### 2. Less Expensive Sales Methods

Many associations have eliminated altogether the unsatisfactory method of shipping on consignment,

and now do all or practically all of their selling f.o.b. or for a delivered price. In other words, the goods are sold before they are shipped.

Associations are able to trade more effectively with field and track buyers than the average individual grower. Some associations, like the California Fruit Growers Exchange, the Sun-Maid Raisin Growers, and the Eastern Shore of Virginia Produce Exchange, have eliminated the field and track buyers altogether. They claim that the presence of these buyers is an unnecessary expense to the growers and that selling to them places the products in competing hands and makes systematic distribution impossible.

Some associations have eliminated brokers in many markets and substituted their own salaried representatives, thus securing more dependable service at a reduced cost.

Capable management of associations has made it possible to reduce the cost of sales and distribution service. The California Fruit Growers Exchange, during the season of 1920, conducted its entire sales organization, including the cost of its market representatives, the collection of claims and damages, and advertising, at a cost to growers of 2.32% of the delivered value of the fruit.

The Door County Fruit Growers Union of Wisconsin retains only 1% of the returns to pay for sales service.

The Michigan Potato Growers Exchange, during the season of 1919-20, conducted its entire operations at a cost of 1.987% of the total business done.

Of course, these are examples of the work of large associations, which can operate at a lower cost than small associations. However, it has been abundantly proved that even relatively small organizations can furnish sales and distribution service

more efficiently and at a lower cost than individual growers can perform this service for themselves.

### 3. Better Distribution

Organizations have made possible wider and better distribution of products – a factor of great importance with perishables.

Formerly, citrus fruits were considered a luxury and were offered for sale only in large cities; now they are kept on hand regularly by dealers in almost every town and hamlet of the country. The dependable methods of standardization make it possible for dealers to purchase with absolute confidence, and they can readily buy from car-lot handlers in the larger markets in quantities of one box or more.

Formerly, cranberries were considered food for only the holiday season, but now, due to the work of the American Cranberry Association, the consumption is distributed from about September 1 to May 1.

Only a few years ago, Michigan grapes were nearly all shipped to six large markets. The first year after the products were handled through an exchange, they were distributed in 250 markets of the country.

Southern Illinois early apples and peaches were very largely shipped to Chicago previous to 1922. During that season the Illinois Fruit Exchange, in its first year of operation, distributed about 900 cars of fruit in 115 markets in 24 states and four Canadian provinces.

Markets Are Scientifically Supplied – Organizations which control a large proportion of the output of a given commodity have been able to work out methods of distribution by which each market is kept steadily supplied with its needs and no more. Thus, ruinous prices, due to overcrowded markets, are avoided and consumption is encouraged to the limit.

Associations which do not control the output of the commodities they handle, have accomplished the same purpose in a sort of post mortem way by studying the markets and placing their products in markets offering the best quotations. Satisfactory offers do not come as a rule from flooded markets. Of course, the market may be flooded by the time the products arrive, and in such cases the shippers may expect more or less unwarranted rejections by dealers in an effort to avoid losses or force reductions.

It is needless to say that wide and systematic distribution increases the sales, makes it possible to dispose of larger crops, and results in better prices to growers.

#### 4. Products Standardized

Through cooperative associations, growers have been able to standardize their products on a sufficiently large scale to accomplish the fullest benefits therefrom.

The largest individual growers, no matter how well their products may be graded and packed, are able to supply only a limited tonnage in comparison with the great quantities on the markets, and they can keep their products before only a relatively small portion of the consuming public. Thus, they cannot command constant attention to their products.

State and national laws or standards have done much to promote standardization, but many cooperatives have gone far ahead of them in standardization methods. The grades of many associations are stricter than those specified in the laws or standards.

Trade Marks Adopted—To accomplish the best results from standardization, most cooperative associations have adopted brands or trade-marks for designating their products. Examples of famous brands are: Sunkist oranges and lemons, Red Star (Virginia) potatoes and sweet potatoes, Cataract

(New York) apples, Sun-Maid (California) raisins, and Skookum (Washington) apples. All of these represent highly standardized products which have attained distinction among dealers and consumers, and they bring increased returns to the growers.

### 5. Consumption Increased

Cooperative associations have proved a means of increasing consumption.

Wider and more systematic distribution has placed the products before a greater proportion of the population. Through advertising of standardized brands, people have been induced to consume more of such products.

The Sun-Maid Raisin Growers, for instance, increased the consumption of raisins through better distribution and advertising, from 50,000 tons in 1913 to 175,000 tons in 1920.

The California Fruit Growers Exchange, during a period of four years, from 1916-17 to 1920-21, increased the consumption of oranges from 45 to 50 per capita, and the consumption of lemons from 13 to 16.6 per capita.

The increasing of consumption through better methods of standardization, distribution, and advertising has been the means of making profitable greatly increased plantings of fruits and vegetables in some sections, stimulated by the increased returns received by growers through cooperative associations.

### 6. Growers' Problems Solved

In many states, cooperative associations have been quite influential in securing the passage of legislation in the interests of fruit growers. Cooperative efforts also have assisted materially in securing better refrigerating service for perishables. In a large number of cases, the co-



operatives themselves have established pre-cooling plants in order to put their products into better condition for long distance shipment.

Many associations have been able to secure better service or lower rates from the railroads. Practically all associations have proved quite helpful in the collection of claims and damages of all kinds for their members.

### 7. Supplies Bought to Better Advantage

Cooperative associations have enabled growers to buy supplies to better advantage.

In many cases, the supplies can be purchased at markedly lower prices than the growers can purchase them as individuals. Quite commonly, too, associations buy supplies of better quality than do individual growers. Many associations have materially benefited their members by keeping supplies in stock.

By pooling orders in car-lots, associations have been able to reduce freight charges for members, and have also been able to secure more prompt delivery than many growers could otherwise secure.

## ESSENTIALS OF SUCCESSFUL ORGANIZATIONS

A study of the organization and operation of fruit and vegetable cooperatives shows that certain basic principles are usually followed by those that succeed. Among the most important of these are the following:

1. Production must be concentrated
2. Local units needed
3. Organize central associations for sales service
4. Organize on a commodity basis
5. Adopt a commodity contract

6. Strive for early results
7. Maintain grower control
8. Adopt an equitable system of representation
9. Get sufficient tonnage to insure low overhead
10. Develop a strong financing plan
11. Pro-rate expenses on actual cost
12. Use an equitable pooling plan
13. Maintain a strong standardization policy
14. Emphasize production of quality products
15. Provide capable management

### 1. Production Must Be Concentrated

In order to develop successful cooperative fruit and vegetable marketing associations, it is necessary that production be concentrated more or less by communities.

In the first place, it is essential that the products be shipped in car-lot quantities. Considerable overhead expense is involved in the employment of a manager and other help and in providing the right kind of equipment. The perishable nature of the product necessitates fairly short hauls and quick handling. These and other factors combine to make concentrated production necessary.

From the standpoint of cooperative fruit and vegetable marketing, it is best therefore, for each community to determine the crop or crops best adapted to its conditions, and then concentrate on the production of these, growing as few varieties of each and following as uniform cultural methods as possible. No workable plan has yet been found for cooperative handling and marketing of perishable products grown in relatively small quantities over a wide area.

### 2. Local Units Needed

Some commodities, like seeds, cotton, and tobacco, lend themselves to centralized organiza-

tions without locals, spread more or less over a wide territory, but the perishable nature of most fruits and vegetables makes quick and careful handling imperative, and for this reason, stronger local control is necessary. The basis of fruit and vegetable cooperation should be the local unit.

By a local unit is meant the territory tributary to a given shipping point. The growers who ordinarily haul to this point should be organized into a local association. The size of the local unit will vary according to roads, railroads, and other considerations. It is rare for a local unit to draw tonnage for more than 10 or 12 miles; usually 4 or 5 miles is the limit.

The local unit should receive, handle, grade, pack, load, and ship the products. If the local is not affiliated with other similar associations in a central organization or exchange, it may also handle its own sales and distribution service, either directly or through an agent.

In handling products like apples, oranges, and so on, the local unit will need to provide packing houses and equipment. For other products, like strawberries, only relatively cheap inspection platforms are necessary, and for still other products, like watermelons, practically no equipment is necessary.

### **3. Organize Central Associations for Sales Service**

Where there are a number of similar local units in a given district, these should be federated for the most efficient sales service into a central association or exchange. Operation of local units on an independent basis simply repeats in a larger way the ruinous competition and inefficient methods of individual growers. The central association will be able to provide a more efficient sales and dis-

tribution service than locals operating independently.

In some exchanges covering a large territory, the local units are organized into districts or sub-exchanges, and these are then federated into the exchange or sales organization.

#### 4. Organize on a Commodity Basis

It is best to confine each organization to commodities that are closely related. For instance, oranges, lemons, and grape fruit are all marketed successfully by the California Fruit Growers Exchange. The deciduous fruits, including apples, pears, and peaches, are also marketed successfully together by other associations. Still other associations confine themselves to grapes.

One of the reasons for organization on a commodity basis is that the problems of financing, storing, and handling products of different kinds vary, and that it is difficult or impossible from legal and business standpoints to work out an equitable system of prorating expenses and meeting possible losses.

Another reason is that the growers of different commodity groups represent different types of minds. Groups of growers representing different viewpoints do not mix well in the same association.

When Two Associations May Be Desirable - It often happens that there are two or more factions or nationalities of growers in a community interested in the same kind of products. If the tonnage is sufficient, it may be advisable under such conditions to organize two or more units, placing each faction or nationality in a different unit.

Organization of local units on a commodity basis does not mean that the association must confine itself strictly to those particular commodities. For instance, if a tree fruit association has some

members who grow cantaloupes as a side line, and if said growers want the association to market their melons, and if the association can do so without interfering with its other duties, there would be no harm in handling such products.

The Michigan Potato Growers Exchange, while organized and operated primarily for marketing potatoes, marketed 27 different crops during 1920. However, all of the products, except potatoes, were incidental to the main operations of the Exchange.

How Associations May Combine Activities - Organization on a commodity basis, furthermore, does not mean that an association cannot cooperate with other similar associations for the purpose of reducing overhead expenses. For instance, in a Corn Belt community, there may not be sufficient fruit or live stock to justify an association of either. However, by organizing both branches on a separate basis and cooperating in the overhead expenses, such organizations may become feasible. The same manager and bookkeeper could serve both associations, and the headquarters of both could be in the same building. There is a limit, however, to which such cooperation can be extended, and such matters should be considered very carefully by those in authority to make sure that the proposition is a workable one before attempting it.

### 5. Adopt a Commodity Contract

In order that the board of directors may wisely make arrangements in advance for successfully handling the products, all members should sign contracts covering the marketing of their products. Such contracts should appoint the association sole marketing agent. They should run for not less than three to five years, since more than one year is necessary for the association to become well established.

After the first three to five years, the growers should have the option to cancel the contract in

any year during a stated period. Among other things, the contract should provide for the standardization of products, methods of pooling, the assessment of charges for operating expenses, reserve, and equipment, the making of returns to growers, and for damages in case of violation of contract.

Some growers may object to a contract, claiming their word is good; but nearly every important business transaction is accompanied by a contract. Each check, note, order, telegram of offer or acceptance, or letter of confirmation that we sign, or each deed or marriage license, is a contract.

By means of cooperation, we are trying to improve upon systems of marketing which have been in the building for a century, and surely this is a sufficiently serious proposition to justify a contract.

It is needless to say that the contract should be drawn very carefully. A grower's committee should decide upon the points they wish to incorporate in the contract, and these should then be submitted to a competent attorney for arrangement in proper legal form.

## 6. Strive for Early Results

The conditions of the industry should be such that the proposed association will have a fair chance to render an unmistakable service to its members within a reasonably short time after the organization is completed.

The problems of standardization, transportation, or sale and distribution of products should be such that the association will be able to give a good account of itself early in its existence. Of course, ultimately, the growers will judge the success of the association by the net returns they receive in comparison with the returns secured by non-members. The growers, if properly informed,

will be patient for a while without tangible results, but they cannot be expected to remain very long with a losing proposition.

In the early days of cooperation, it was practically impossible to organize until sheer necessity forced the growers to do so. This factor no doubt plays a large part in organization at the present time. However, the object lessons of the early cooperatives, together with the educational work of farm bureaus, state marketing departments, extension specialists, and other agencies, are causing the organization of many successful associations long before necessity forces it. Better understanding of business problems by growers is causing them to organize in advance of the time that necessity drives them to it.

### 7. Maintain Grower Control

In the history of cooperative organization, a few attempts have been made to blend the interests of growers with those of outsiders, such as buyers, dealers, or speculators. These attempts have uniformly resulted in failure. It is difficult enough to organize and operate an association successfully when it is confined strictly to grower ownership and grower control. Attempts to handle conflicting interests under one organization are doomed in advance to failure.

### 8. Adopt an Equitable System of Representation

Each grower should have direct representation in the annual and special meetings of stockholders or members of his local association, and he should be represented by a delegate in any central association which may exist.

Voting may be on the one-member one-vote principle, on the basis of tonnage, or on a combination of the two. All have proved successful. The California Fruit Growers Exchange adopted the

principle of one-member one-vote, with a provision for a vote based on tonnage in case such was demanded. During a period of 10 years, the tonnage vote was demanded only twice; and the result then was the same as it would have been on the one-member one-vote principle.

Everything considered, the one-member one-vote principle is the best. Large growers are usually men of more prestige than small growers, and almost invariably they are more influential in the affairs of the association.

The Capper-Volstead cooperative law requires the one-member one-vote principle in associations which desires to gain the immunity granted cooperative associations under this law.

#### 9. Get Sufficient Tonnage to Insure Low Overhead

Whether or not it is advisable to organize a local association is not determined by the number of members available, but rather by the volume of tonnage in prospect. One grower can, in principle, become an association if he has sufficient tonnage.

Opinions vary as to the tonnage necessary for a successful unit. One successful leader in the South holds that local units should be organized early in the development of the fruit industry, so that the growers may become accustomed to cooperative methods from the beginning. A New York manager claims that 5,000 barrels of apples (about 35 cars) are necessary for a successful apple local. In the case of strawberries, some leaders think that 15 or 20 cars will justify a local.

The smaller the tonnage, the more important it is that the products move to market within a comparatively short time. Leaders seem united on the point that a local should ship on the average of at least a car a day through its marketing season. In the case of small locals, the overhead can be kept at a minimum



by retaining the manager only during the crop moving season. Such locals can advantageously combine cooperative purchasing with the marketing in order to retain a manager over a longer period. The nearer the association can come to operating the year round, the more prestige it will command among its members.

A central association or exchange is hardly justified unless there are at least 500 cars annually of a product comparing favorably with apples or peaches in value.

#### 10. Develop Strong Financing Plan

Many associations fail because of insufficient financing. If the growers are not ready to finance their association on a sound basis, it is pretty good evidence that they are not ready for cooperation. As a rule, each grower has several thousand dollars invested in his production operations. It is not unreasonable that he should invest a few hundred dollars toward perfecting a marketing organization.

In the organization of precooling plants, canneries, commission companies, storage plants, and cider factories, it is quite common to sell stock in order to secure ready money.

In states where the laws permit, most of the associations shipping to distant markets in car-lots are organized on the non-stock, non-profit plan. In such associations, the preliminary financing is very satisfactorily accomplished by loans from members or by membership notes, either uniform in amount for all growers, or varying in amount according to acreage or tonnage. The notes are used as collateral in borrowing money. They serve excellently for short time loans and make it possible to avoid idle money in the treasury. A cooperative association, however, is usually not handicapped by such a situation.

The running expenses of cooperative associations are paid out of assessments made on the products sold and supplies purchased. These charges should be fixed by the directors or members at the beginning of each season. A wise board of directors will set these charges too high rather than too low. The excess, if any, can be placed in the reserve fund or refunded to the shippers.

For permanent financing, including the accumulation of working capital and the acquiring of equipment, a revolving plan has proved excellent for non-profit associations. Capital stock organizations may also adopt the same plan and use the money so collected in the same way, or to pay for stock subscribed for by the member.

Under a revolving plan, a certain percentage, or a fixed amount per car, per bushel, or per other unit of volume, is retained from each grower's returns. Some associations issue certificates of indebtedness at the end of each season showing the total amount retained from each grower's returns, but it is probably better to handle this matter on the books as an obligation to growers.

When the revolving fund has reached the size prescribed in the by-laws or fixed by the directors (the latter is probably preferable), the deductions are continued as before, and the excess thereafter accumulated is used to redeem the outstanding interests of contributors in the revolving fund in the order in which such interests were created. Withdrawal of a member should not affect his interest in this fund or the time or conditions of redemption thereof.

The revolving plan is fair and equitable from every standpoint. It insures financing by every member, and in proportion to the extent he uses the association. Growers retiring from fruit growing receive in time all the contributions they have made to the revolving fund. Growers who do not

join the cooperative at the beginning are prevented from throwing the cost of equipment on the shoulders of the early members and are required to furnish their proper share of the financing when they join.

### 11. Pro-rate Expenses on Actual Cost Basis

The handling, standardizing, and marketing of products should be charged for, as nearly as practicable, at actual cost. Each grower should contribute to the expense of maintaining the association in proportion to the extent he uses it, which is wholly equitable from every viewpoint.

In practice, the directors fix the various charges early in the season, taking account of the prospective tonnage and expenses of the association. It is always advisable to set the charges a little higher than seems necessary to meet expenses; the excess, if any, can be refunded or placed in a reserve fund.

The handling, grading, and packing should certainly be charged for by the package or ton, for it costs as much to pack a package of poor fruit as a package of good fruit. Furthermore, a charge fixed on a package basis is an incentive for all growers to do their utmost to produce high quality products.

Theoretically, the sales and distribution service should also be charged for by the package or ton, for it costs as much to market a package of poor fruit as a package of good fruit; in fact, it often costs more. However, in practice, charges for sales and distribution service are often a percentage of returns.

### 12. Use an Equitable Pooling Plan

Where a uniform quality of products is grown over a wide territory, it is possible to pool the output by districts, by variety, and by grade. It is advisable to plan the pools on as large a scale as is

equitable for purposes of insurance to the growers and to prevent the criticism that one community is securing better prices than others.

However, where there are variations in earliness of maturity, soil types, and so on, it is often advisable to make smaller pools. In such cases, pools are often made for each day's sales by variety and grade for the entire district.

In many exchanges, the locals are given authority over their own pooling arrangements, and the returns are made to the different locals the same as received, less handling charges. Whatever method or methods of pooling are adopted, each grower should receive the same as all other growers participating in a given pool, for the same kind, variety, and grade of products.

### 13. Maintain a Strong Standardization Policy

A strong standardization policy is imperative. Upon this will very largely depend the success of the association. It is impossible to build up a reputation without careful attention to picking, grading, and packing. Where the local associations are federated into a central sales organization, the central association should have authority over all standardization. State standards should be used in places where state laws exist. In states having no standardization laws, the government standards will be found quite serviceable.

### 14. Emphasize Production of Quality Products

It is impossible to market products of poor quality successfully. The higher the quality, the easier it is to build up a successful cooperative association. From the start, the association should emphasize the production of high quality products by every means at its command. Community packing houses will assist greatly in this direction, for when one grower sees that his neighbor's fruit is

packing out a higher percentage of No. 1 products than his own, he is sure to become impressed and give more attention to his growing methods.

To gain high quality, cooperation should be encouraged in all matters pertaining to better and more uniform production. For instance, the Southwest Georgia Melon Growers Association buys the seeds for its members, and treats them for anthracnose. This association requires the growers to use no nitrate of soda, since this results in melons of poor carrying quality. It requires that growers thin the melons to two per hill in order to insure large size. It requires growers to treat the cut stems and wax them to prevent rot in transit. All of these operations play an important part in the production of melons of uniformly high quality. Not only do such melons sell for higher prices, but fewer cars are rejected.

#### 15. Provide Capable Management

Capable management is absolutely necessary for successful results in cooperative organizations.

A cooperative organization is a purely business proposition, the same as any other kind of business, notwithstanding the fact that it is also concerned with matters of mutual interest which are not common to other businesses.

There is an inclination on the part of some to regard cooperation as an unsound proposition because a cooperative failed in the community some time in the past, or because they have heard of one somewhere else that failed. It is certain that a cooperative will fail, the same as any other business, if not properly managed.

Many failures occur in other lines of business and it is to be expected that a cooperative will fail occasionally. However, statistics show that the percentage of failures is no greater in cooperative

associations than in business associations in general. Banks and factories fail occasionally, but no one regards banks or factories as unsound propositions because one fails now and then.

The very best marketing plan is almost sure to fail without capable management. On the other hand, many associations with a more or less faulty plan have succeeded through good management. Capable management, therefore, cannot be emphasized too much by the directors and members. While it is desirable to employ a manager at as low a salary as possible, the selection should be made for efficiency rather than for economy.

### MARKETING PRODUCTS GROWN NEAR MARKET

Great quantities of vegetables are produced near almost every important city and in some cases, tree and small fruits are also grown in quantities.

These products are usually hauled by wagon or truck directly to public markets, commission houses, wholesalers, retailers, or to consumers. This kind of marketing is becoming more and more important each year. Good roads and automobiles are making long hauls possible. High freight rates from distant producing sections are encouraging more production near the points of consumption. Cities and towns are growing rapidly all over the country.

Very little cooperative organization has been accomplished to date in connection with this kind of marketing. Many of the growers do not like to break away from the habit of selling their own products, and again, growers near market have not been so hard pressed as growers at a distance from market. However, conditions in some market gardening centers have caused growers to form organizations of one kind or another.

### Cooperative Public Markets

Two principal kinds of organizations have been formed to meet the problems: one consists of organizations which do no actual marketing, but which assist in providing facilities in the way of ground space, shed room, and so on, so that the growers may market their own products to better advantage or with greater convenience; the other consists in the organization of grower-owned and grower-controlled commission houses which take care of the actual marketing for their members or stockholders.

In Detroit, Michigan, for instance, the municipality is promoting a public market. Several square blocks of land have been purchased and market sheds have been built thereon in such a way as to make it more convenient for both the growers and purchasers. Space is rented to growers by the day or by the season. Thus, a grower is assured a regular place, protected from the sun and rain.

### Gardeners' Cooperatives

At Cleveland, Ohio, the market gardeners have themselves bought a marketing site. Besides providing abundant space for growers to do their own marketing, they also have a house in which is marketed under one management on commission, the products of growers who prefer this method. This association, therefore, is a combination of the two types of organization described under this and the succeeding heading.

There is also a growers' organization at St. Louis which owns a marketing place with sheds and buildings erected thereon. The shed space is rented to growers, while the buildings are rented to private organizations.

### Grower Owned Jobbing or Commission Houses

In some market gardening sections, the growers have not been content with the public market plan

of selling, and have therefore organized grower-owned and grower-controlled commission houses. Through such organizations, growers have been able to save the time and expense of marketing their own products, and they have also avoided ruinous competition with each other.

In Providence, Rhode Island, a group of gardeners formed a commission house which is said to do the largest business in the city. It also buys large quantities of supplies for its members. A similar organization has been formed by market gardeners at Grand Rapids, Michigan, and several such organizations have been formed by greenhouse owners near Chicago.

All of these are organized on a capital stock plan, with broad powers. They do no pooling, but simply sell the products on their own merits for each member. Besides selling on a commission for their stockholders, these associations buy, sell, and deal in outside products in order to keep their equipment, their employees, and their capital busy the year round, and in order to retain their customers.

#### A Non-Profit Commission Association

The Michigan Farm Bureau Federation is conducting a non-profit commission house in Detroit, Michigan. It sells products only for growers within hauling distance of Detroit and for cooperative associations at a distance. It does not buy, sell, or deal in, outside products.

While these organizations seem to be succeeding, they are comparatively young in their experience and it hardly can be said as yet that the organization of such associations is justified under a wide variety of conditions. Only experience can teach to what extent the growers will be justified in forming such organizations.



### HOW TO ORGANIZE

Now that you understand the principles back of successful cooperation, you will want to know exactly how to go about forming an organization.

How may you know what community is likely to be successful in cooperative marketing?

Why is it that the business men of the town may sometimes foil cooperative efforts?

How may you avoid energetic opposition on the part of commercial interests?

What is the best method of insuring that all farmers will be loyal?

These, and dozens of other practical questions must be answered before cooperative organization is attempted. Mr. Durst gives most practical and clear answers to all questions concerned with cooperative organizations in the lesson that follows.

## GLOSSARY OF MARKETING TERMS USED IN THIS LESSON

central association. As used in this lesson, synonymous with term "exchange."

certificate of indebtedness. A document issued by a cooperative, which indicates that the association owes a certain amount to the member to whom the certificate is issued. Such certificates are sometimes issued when the association retains a certain percentage of the returns for a revolving fund.

commodity contract. A document in which a cooperative association agrees to market, and the grower agrees to deliver to the association, for marketing, the product or products named in said document.

community packing house. A building in which farm products of many producers are prepared, graded, and packed for cooperative shipment.

delivered price. An amount agreed upon to be paid for certain products upon delivery, the seller to pay freight charges.

distribution service. The service involved in handling, shipping, and marketing products, and in distributing them in markets where there is a demand for them.

exchange, n. An organization which is sectional in its scope, usually embracing a district, in which the problems of production and marketing are similar. Most commonly, an exchange is a federation of local associations, but sometimes it is composed directly of individual growers, and occasionally an exchange consists of several district exchanges, which in turn, are federations of local associations.

field buyer. A buyer operating either for himself on a speculative basis, or as agent for a dealer, who purchases products in the producing sections, often before the products are harvested.

local, n. A shipping or marketing association which serves a single community, and whose members live within reasonable hauling distance of the shipping point.

membership note. A note given by a member to his association, and which is used by the association as collateral for borrowing money. As a rule, such notes are non-interest bearing, and are collectable

only in the case of failure of the association, in which case the creditors would be able to recover from the signers of the notes.

pro-rote, v. To divide in a certain proportion. As used in this lesson, refers to the dividing of returns from the sale of fruits and vegetables among the members, in proportion to the quantity of each variety and grade contributed to each pool.

public market. A space of ground in a city provided with sheds and sometimes with buildings, where producers may offer products for sale to consumers or dealers, or to both. Sometimes operated by the city and sometimes by the farmers themselves.

sales service. As used in these lessons, the service connected with the handling, selling, and distributing of fruits and vegetables after they are prepared for shipment by the grower or association.

tonnage, n. A general term used to represent volume of product; for example: "The Illinois Fruit Exchange shipped a tonnage of 1052 cars in its first year of operation."

track buyer. A buyer who purchases farm products from a producer or cooperative association at the loading point, sometimes in car-lots and sometimes in less than car-lots; in the latter case, the assembling and loading is done by the buyer.

transient labor. As used in this lesson, consists of workers, usually pickers, packers, loaders, and so on, who travel from place to place in search of employment as the products mature in the various sections.

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Note: This is part of the Marketing Dictionary supplied with this course.

## QUESTIONS TO LESSON 12

As soon as you have mastered this lesson, answer these questions and submit your answers to The American Institute of Agriculture, Chicago, Ill., for grading or correction.

Do not fail to write your name, address, and matriculation number plainly on each set of answers you send. Be sure to give the number or letter of the lesson, and the number of each question answered. Write the question in full before writing the answer. Be brief and explicit. Confine your answer to the length indicated, if possible. Use a typewriter, if you have one.

Answer all questions. If any are omitted, the omission will count against you.

- I. Name the seven advantages of fruit and vegetable cooperative marketing.
- II. What advantages do producers derive from community packing houses?
- III. How have cooperatives changed the methods of sale?
- IV. Name at least one of the illustrations given in the lesson representing the percentage of the sale price required for selling expense.
- V. Are the products of a state usually sold in more markets or in fewer markets when a cooperative exchange does the selling? Give at least one illustration.
- VI. Name the 15 policies that are usually followed by a successful fruit and vegetable cooperative.
- VII. To what distances are fruits and vegetables usually hauled to a local cooperative marketing association?
- VIII. Why is a cooperative usually more successful when it handles only one commodity or one type of commodity?
- IX. Under what conditions might it be advisable to organize two cooperatives in the same community for marketing the same product?
- X. Name the two types of organizations commonly formed by growers near market.





# How to Organize a Cooperative Fruit and Vegetable Marketing Association

By C. E. DURST



## MARKETING FRUITS AND VEGETABLES LESSON 12

With Supplement Relating to  
Constitution and By-Laws

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CHICAGO





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RURAL INSTITUTIONS  
UNIVERSITY OF CALIFORNIA  
BERKELEY, CAL.

## HOW TO STUDY THIS LESSON

Inasmuch as a great deal of the trouble that has been experienced by some cooperatives has been due to the mistakes in organization, it is exceedingly important that every student should master this lesson thoroughly. The lesson is made up of experiences of the author in organizing dozens of cooperative fruit shipping associations, as well as experience in organizing state exchanges and in helping to organize the national federation known as the Federated Fruit and Vegetable Growers', Inc.

Not only are the principles of successful organization brought out, but actual methods for following these principles are detailed. Study with the viewpoint of an organizer. Consider that you have been employed by the state farm bureau to organize cooperatives in your state. With this in mind, study the lesson to prepare yourself for this work.

After you have studied the lesson once or twice, make a list of the conditions that should be taken into consideration in organizing a cooperative in your own locality. Work out a definite plan based on this lesson for organizing such a cooperative and make it fit your own conditions. Then study the lesson again to make certain that you have developed a plan that will be effective.

After you feel that you are capable of serving as an organizer, then study the lesson with the viewpoint of a producer. Consider that you have an orchard in bearing and that you must find a way to get more for your produce. Study the lesson to find out if the organization you are invited to join has been planned so that its success is practically assured.

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# **HOW TO ORGANIZE A COOPERATIVE**

**BY C. E. DURST\***

No established plan of organizing a cooperative fruit and vegetable association can be presented that will meet all conditions.

A plan that might prove successful under one set of conditions may not prove adaptable elsewhere. No two leaders would be likely to follow the same plans under similar conditions, and yet both might achieve equally successful results.

At the same time, there is opportunity and need for more uniformity in methods or organization than has heretofore existed.

## **HOW TO PREPARE FOR ORGANIZATION**

If you are the leader who proposes to organize an association, you must do four things to insure success:

1. Inform yourself on the principles of cooperation
2. Encourage confidence among local leaders
3. Investigate local conditions
4. Promote an educational campaign

### **1. How to Get the Facts About Cooperation**

Study the by-laws, contracts, and reports of successful organizations and study them in detail.

Make visits to a number of associations whose problems are similar to those of your locality and study the methods of these associations at first hand.

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\*Secretary of Federated Fruit Growers, Inc.; for complete statement of his experience, see Lesson 12

Interview growers and business men, as well as sales managers and officers of marketing associations.

By all means, acquaint yourself fully with the cooperative principles presented in this course before attempting to organize an association. You will gain time this way in the long run, and your work will be better done when you get at it. Much harm has been done the cooperative movement by persons with more enthusiasm than understanding, and not a few would-be leaders have prevented cooperative success by premature attempts at organization.

## 2. Encourage Confidence Among Leaders

An important step in forming any cooperative association is to promote confidence among the leaders of the community. If there is a farm bureau in the county, you should by all means cooperate with the county agent. In fact, it is unlikely that any cooperative can succeed without the support of the leading agricultural organizations of the community such as the farm bureau. Furthermore, the county agent can usually give much valuable information, as well as support. Be sure to find out who the most influential leaders among the growers are, and work closely with them.

Also, cultivate the good will of agricultural teachers, bankers, lawyers, editors, ministers, and business men interested in community betterment. In organizing district associations, it is well to cultivate the good will of state extension representatives, state marketing officials, officials of bankers' associations, representatives of the farm press, and so on.

Give this matter of developing interest among community leaders your most careful consideration. These leaders can be most helpful, or they can be most harmful. If one leader is overlooked, there

is danger of his feeling that he was purposely slighted. And if you fail to bring an influential leader to your side at the beginning, there is great danger of his opposing the plan, principally because he does not understand the advantages, and also because he feels that he was "left out."

It is always difficult to get a person to change his mind after he has once formed an opinion. Cooperation by its very nature requires the interest and good will of all community leaders, and so, the development of this good will must be one of the most important considerations in planning an organization.

### 3. Investigate the Conditions

Before organizing a cooperative, you must make certain that conditions are favorable for its success. The only way to determine the possibility of success is to make a thorough investigation and to bring together information on the following points:

- a. The amount of tonnage available
- b. The quality of products to be marketed
- c. The popularity of the varieties grown
- d. The local hauling distances
- e. The character of the opposition to cooperation
- f. The desire of growers for cooperation
- g. The results of previous attempts to organize
- h. The attitude of business men in the community towards cooperation

For a local, you need to investigate these points only in the community from which the shipments will be received, but if you are planning the organization of a district association or exchange, it will be necessary to make similar investigations in all of the communities of the district that show interest in the plans. Ordinarily, the organization of an exchange practically amounts to an organization of

a series of locals to be federated into an exchange, and so, an investigation must be made for each local.

In addition to this, it must be determined as to whether any very strong rivalry exists between the various communities to be organized. Such rivalry sometimes becomes a serious obstacle to successful exchange operation.

Carefully consider the location for the exchange headquarters. The headquarters should be located in a place that will be most advantageous over a long period. The future must be borne in mind.

You must take into consideration the possibility of other locals being formed later on that will want to join the exchange. Other things being equal, the central office should be as centrally located as possible, but good railroad facilities, highways, telephone and telegraph connections must be had, even if the offices are not in the center of the district. The need for these facilities is usually the reason for locating an exchange office in some place other than the geographical center of the district.

a. The Tonnage Required - As you learned in Lesson 12, cooperative leaders generally agree that a local, in order to be successful, must ship an average of about one car a day during the shipping season. It is difficult, however, to set down an exact rule on this point, due to the fact that local conditions vary extremely. For example, there might be a situation where a business man would serve as manager of the local at a much lower salary than a man hired to devote his whole time. In such a case, it might be possible to have a successful local with smaller shipments.

Consequently, this part of the investigation must not only determine the tonnage of products likely to be available, but must also determine whether this tonnage is likely to be enough to make the venture profitable.

b. The Quality of Products Available - Obviously, a local cannot be much of a success if the products of its members are below grade. It is true that the local, after it is formed, can have a good influence over the quality of goods shipped, but if the community is not already producing a good quality of products, it is questionable whether the local will be an immediate success.

c. The Varieties Grown - If the varieties grown in the community are unpopular on the market, a cooperative association is not likely to counteract this handicap. It is usually the best thing to grow these varieties that are in demand, rather than to try to develop a market for the unpopular varieties grown. With this in mind, you will see that the growing of unpopular varieties may prevent the success of a local cooperative.

d. Local Hauling Distances - The most expensive part of transportation, as a rule, is the hauling from farm to station. If the local hauling distances are very great, the cooperative may be handicapped by this fact, and may not be so great a success as it should be.

e. The Character of the Opposition - If there is an especially strong opposition, including several well-financed buyers, this may prove an obstacle that will prevent your association from shipping enough tonnage to make a profit. This must be considered. Sometimes it is helpful to talk with the managers of these competitive concerns, or with higher officials. Their attitudes can thus usually be ascertained. It may be found that they will not present so much opposition as expected. At least the situation must be investigated thoroughly.

f. The Desire of Growers for Cooperation - It is "up hill" business, to say the least, to try to force an organization on growers who have not made up their minds that they want a cooperative. It is essential, therefore, that you are absolutely cer-

tain that the principal growers of the community really want a cooperative association. It is possible that this desire may not be apparent when you begin your work; it may be developed as you proceed, but it must be present before organization is attempted.

g. The Results of Previous Attempts to Organize

- If previous attempts in organization have failed, it will be more difficult to promote cooperation. As a matter of fact, the work should be conducted with caution and tact. Perhaps the most important thing is to ascertain exactly why the previous organization failed. Knowing this, you can, perhaps, explain the matter satisfactorily to the growers of the community, and, at the same time, show exactly how the new form of organization will prevent a similar failure.

h. The Attitude of Business Men for Cooperation

- You must not overlook the fact that the business men of the community have a very specific interest in local cooperative ventures. They are just as much a part of the community as the farmers, and if the business men in general oppose cooperation, the farmers will have unusual difficulties in making their association a success. On the other hand, if the business men are favorable to the work, their good will will go a long way towards insuring success.

How to Use Charts and Maps

Usually nothing puts the matter before a meeting quite so well as charts and maps. If you will collect accurate information as your investigation proceeds, you will be able to make a map showing the location of orchards or vegetable gardens with respect to the shipping station where the association will operate. You may also be able to locate on the map those orchards or gardens that are owned by men who do not intend to join the association. This will show the opposition that the association is likely to have.



Charts may be prepared to show the relative amounts of the various varieties grown. This will serve as a basis for explaining how the varieties are likely to have an affect on the success of the venture.

#### 4. Promote an Educational Campaign

If the investigation indicates that the conditions are favorable for a successful association, you should begin an educational campaign. In fact, you can well begin this during the investigation period.

The purpose of the educational campaign is to get the growers and other influential leaders to understand cooperation and to bring to the support of the movement every factor which can possibly be of any assistance. Even with every possible force working in harmony, it is difficult enough to organize a cooperative and get it into successful operation.

Your educational campaign should be planned to reach not only the growers, but community leaders in other lines of business. It should teach them the principles and advantages of cooperation, both to the growers and to the community in general.

The county agent can use his news letters effectively in building up the proper spirit. Newspaper articles of the right kind help tremendously. Meetings furnish an excellent opportunity for education. If possible, get some of the growers to visit successful cooperatives and study them and make reports of their visits to the farmers in your community.

Follow a conservative policy in your educational campaign. Excite as little opposition as possible. Avoid radical statements, for these impress some growers unfavorably, as well as excite unnecessarily the dealers and speculators.

Remember that extravagant claims will be obstacles for you to face later.

Use your efforts to prevent the growers from expecting too much from the association at the start. Try to get them to understand that the object of cooperation is to make some fundamental improvements in their marketing methods, and that to do this they must replace systems which are strongly entrenched and capable of putting up a strenuous opposition. They must not expect results too quickly, but results are sure to come in time through the right kind of cooperation.

One of the hardest problems is to get growers to feel that the organization is their own. Prompt this spirit in every way possible. Do as little talking as possible yourself, but get the growers to talk and commit themselves on cooperation.

Do not be impatient for quick results. If there are no other cooperatives near, it may require some time to convince the growers of the value of co-operation. If successful cooperatives are located nearby, very little education may be necessary. Do not be discouraged if the interest is weak at the start. Be sure the growers understand cooperation before attempting to organize. Delays may be discouraging, but a failure through premature organization is worse.

#### HOW TO CONDUCT THE ORGANIZATION MEETING

After you are sure the growers are ready for organization, you should call a meeting. If it is a local association you are trying to organize, send out a notice describing the purpose of the meeting to all the growers and other leaders favorable to the cause.

If it is a central exchange you are trying to organize, you should first call a meeting in each community and get each one to appoint a committee

with authority to act. You should also invite to this meeting a representative of the state farm bureau and leaders of other agricultural organizations, a state marketing official, a state extension representative, a member of the bankers' association, and local and farm press representatives.

Someone should have a definite plan worked out in advance for conducting the meeting, which should be called to order by the farm bureau president or other capable leader. He should explain the purpose of the meeting and suggest the election of a chairman and secretary.

Two growers should be ready with appropriate nominations. This may seem rather arbitrary, but it will appear businesslike and will bring better results than if the nominations are made off-hand after the meeting starts. Organization meetings should proceed with considerable energy if they are to have the desired effect on growers.

After the preliminaries are out of the way, the meeting should be addressed by some good speaker thoroughly acquainted with methods of cooperation. He should explain the principles of cooperation, the essentials for success, and the benefits to be derived from cooperation. He should illustrate these remarks abundantly, preferably using near-by associations for examples. He should outline briefly a plan of organization fitted for the community or district under consideration.

After this address, growers and others should be given an opportunity to ask questions and to express their views. If the discussion proves to be favorable, a vote should be taken. If this vote favors organization, the chairman should ask someone to make a motion authorizing the appointment of a committee to draft a plan of organization and present it at a later meeting.

Under some conditions, it might be well to give the committee authority to complete the incorpora-

tion of the association and to conduct a membership campaign. The leader may have the personnel of this committee in mind in advance.

A great deal will depend upon this committee. The most capable growers should be placed on it. They should represent fairly well the different parts of the territory, and they should be men who will work in harmony with each other.

The secretary should take complete minutes of the meeting, recording all motions and the names of the persons who made and seconded them. His minutes should also state whether the votes were unanimous or otherwise, and should include the full names and addresses of men appointed on committees and of the growers and others in attendance.

#### DEVELOPING THE PLAN OF ORGANIZATION

The organization committee should begin work at once. The plan should be completed and presented for adoption before the interest wanes and before the opposition has time to influence growers.

If possible, the leader should have a suggestive form of organization ready. He should emphasize the fact that this plan was prepared in advance only to save time. The plan must be adapted to the commodity and to the community, and the leader must not be disappointed if a number of changes are desired. Often very valuable suggestions are made by growers more or less unfamiliar with cooperative methods. Allow any reasonable changes to be made, for this will help to make the growers feel that the plan is their own, but use your utmost influence to prevent changes that will violate the fundamental principles of cooperation outlined in the preceding lesson.

The committee will need to decide on the general form of organization and prepare by-laws, a contract, membership note or capital stock forms, and an application for a charter.

**Corporation or Partnership Form of Organization**

One of the first things for the committee to decide is whether the association shall be a corporation or a partnership. By all means, incorporate the association, for in a corporation, the association has a legal standing and each grower's liability is limited to the amount of his capital stock or other investment, while in an unincorporated association, which in the eyes of the law is a partnership, each member can be held liable for all of the obligations of the association.

**What Kind of a Corporation Is Best?**

The kind of corporation which should be formed will depend on the laws of the state and the needs of the business to be conducted.

**Form for Shipping and Marketing Organization**

The non-profit, non-stock form of corporation is best for car-lot marketing associations at a distance from the market, for the following reasons:

1. Such associations are purely service organizations and are interested only in collecting a sufficient handling charge to meet expenses and provide for reserve and equipment. This is easily accomplished under most non-profit laws.

2. A non-stock corporation can be formed much easier and with less "red tape" than a capital stock corporation in most states.

3. A non-stock organization can, through proper provisions in the by-laws, exercise better control over its membership, while it is difficult or impossible to prevent the transfer of stock in a capital stock corporation. Thus, there is much more danger of a capital stock corporation passing into the control of disinterested or opposing parties than in the case of a non-stock association.

4. In a non-stock corporation, the one-member one-vote principle can easily be followed. In a

capital stock corporation, state laws usually permit voting according to the number of shares of stock.

5. The corporation laws of some states permit cumulative voting in capital stock corporations, which is a most dangerous principle for cooperative associations. A non-profit corporation, by adopting the one-member one-vote principle, can avoid cumulative voting.

6. A non-stock corporation has a better legal position than a capital stock corporation. The Sherman Anti-Trust Law appears to give some immunity to cooperatives and the Capper-Volstead Law is quite clear in this regard.

7. There are no income taxes to pay under a non-stock form of organization, provided that the association is conducted as such. Any amounts retained as reserve or for a revolving fund should be carried on the books as obligations to growers, which is what they really are in any case.

8. There are no capital stock or excise taxes to pay for a non-stock corporation, whereas, many states require such taxes from capital stock organizations.

9. There are fewer reports to make to state and national authorities for a non-stock than for a capital stock association.

10. A non-stock corporation can, in most states, be quickly and easily incorporated before the organization campaign; whereas, in many states capital stock corporations must have a certain proportion of stock subscribed and paid in before application can be filed for a charter.

In many states, three persons may form a non-stock association and secure a charter. Thus, a non-stock organization can be formed easily in advance of the membership campaign and growers can take out membership and sign a contract directly with a going corporation, all of which gives an

association a better legal status in any future questions that may arise regarding contracts, than if the contracts are made with an attorney for a corporation that is later to be formed.

While a non-stock association is to be preferred, a capital stock organization can readily be used for marketing purposes. If there is not a suitable non-stock law in your state, you should incorporate under a capital stock plan. It probably will be somewhat more difficult to organize and operate under this plan, but the same cooperative principles can be followed.

Each grower can be sold one share of common stock to carry out the one-member one-vote principle. Membership notes can be used if desired, and a revolving plan of financing can be employed. About the only important change in the charter necessary is to substitute for the article on membership an article providing for the purchase, ownership, and transfer of stock. All the other articles can remain practically the same.

In this connection, it might be well to state that with many banks, capital stock associations will likely have a better credit rating, since most banks are accustomed to doing business with stock corporations.

### **Plan for a Local Association**

If it is simply a local association you wish to organize, the procedure is fairly simply. The by-laws and contract in the supplement are offered for your guidance in developing such an association. It may be that you will wish to affiliate the association later with state or national associations and your contract or by-laws should authorize the directors to affiliate the association in any lawful manner, when in their judgment greater efficiency in marketing products or purchasing supplies will thereby result.

### Reorganizing Other Associations

Sometimes a local association which is not truly cooperative is found in a community. The question then arises as to whether an effort should be made to change the policies of such an association or form an entirely new one. If the growers will make the proper changes, including, perhaps, the adoption of new by-laws and a new marketing contract, it may be advisable to reorganize such an association. But if the opinion seems to be badly divided, or if the spirit of true cooperation does not seem to exist, it will be best to organize an entirely new association.

### Form for Storage Plants, Wholesale Houses, and So On

For storage plants, canneries, by-product factories, wholesale houses, and other associations, for which a permanent and uniform financing plan is essential, it is practically necessary to organize as a capital stock corporation and sell stock to the growers.

If such associations are to gain the immunity granted by the national Capper-Volstead law, they must be organized along the following lines:

They must adopt the one-member one-vote principle.

They must not conduct over half the business with non-members.

No member must have more than \$1,000 invested in the association. The latter requirement is working a hardship upon many cooperatives, since in many committees it is impossible to accumulate sufficient capital if investments are limited to \$1,000. Many leaders feel very strongly that this section of the Capper-Volstead Law should be changed so as to permit larger investments.



In such associations, voting can be allowed according to the stock owned, or if it is desired to follow the one-member one-vote principle, this can be accomplished either by selling all members an equal amount of stock, or, in some states, by selling one share of common stock with voting power to each grower and the rest in preferred stock without voting power. In some states, however, the law allows one vote for each share of stock, preferred or common.

A plan of financing as described in Lesson 12 can be adopted for such associations and the money thus raised may be placed directly in a revolving fund and credited as an obligation to growers, or it can be used to purchase additional stock for the growers on a revolving plan.

### **HOW TO ORGANIZE A CENTRAL ASSOCIATION OR EXCHANGE**

Some leaders seem to believe it is advisable to organize local associations and allow these to operate independently for a while before federating them into an exchange. If there are not enough local associations to form a successful exchange, it will be best to allow the locals to operate independently until there are. But if enough tonnage is available to insure a successful exchange, it will usually be best to federate the locals at the beginning and thus get them accustomed to working together from the start.

It is usually much easier to get a new association to cooperate than one which has been operating independently. After a period of separate existence, the manager and officers are likely to become more or less independent and feel that their positions will become less influential or remunerative if the local joins a central association than by continuing alone. Furthermore, such associations are more likely to withdraw from the exchange on slight

provocation than if they are affiliated with the exchange from the start.

In forming a central exchange, the question will early arise as to how the locals shall be affiliated with the central. There are three possible methods, as follows:

1. Form one corporation for entire district
2. Form local associations and federate these into an exchange
3. Have growers join both local association and central exchange

#### 1. One Corporation for Entire District

One strongly centralized exchange can be formed for the entire district, and the by-laws can provide for local units. Under this plan, the local units will get all of their authority from the central exchange instead of from the state. The central exchange will own all the property and have complete charge of the finances and affairs of the locals.

The Eastern Shore of Virginia Produce Exchange, one of the oldest and most successful organizations in the East, is organized on this plan. It covers two counties and has 36 local units. Each unit has a local committee which is accountable to the central board of directors. All property is owned by the central exchange, which, however, does not represent large investments aside from the exchange office building at Onley.

Such strongly centralized associations require particularly expert management, especially in the early stages. An immense amount of detailed work must be directed by the manager at the start, and this is the time of greatest difficulty - when the growers least understand cooperation and are likely to expect too much. Few men can successfully manage such an association in its earlier stages. If such associations can be guided through the early stages

successfully, they can develop into very strong organizations.

The advantages of this form of organization are:

- a. Strong central control
- b. Little tendency for the locals to withdraw on slight provocation

The disadvantages are:

- a. The plan does not tend to promote the sense of local responsibility necessary for the best results
- b. The stronger locals must help carry the risks and mistakes of the weaker ones. However, the better results secured through larger control over the commodity probably offset any disadvantages

Strongly centralized associations spread over a wide territory are proving successful for seeds, grains, tobacco, and like products, and there may be instances in which they are advisable for relatively small and compact fruit and vegetable producing sections. But for general purposes, the writer does not advise this plan. Fruits and vegetables, because of their perishable nature, require quick and prompt handling, and greater local control is, therefore, necessary. The relatively large risks involved make it advisable for each local association to assume its own responsibility in a large measure.

## 2. Federate Local Associations into Central Exchange

A second plan consists in first organizing a series of local associations and then federating these into an exchange. The Michigan Potato Growers Exchange was formed under this plan. Twenty-eight locals were organized in the fall of 1918, and these were immediately federated into the Michigan Potato Growers Exchange.

Under this plan, each grower joins his local, furnishes his share of the finances for it, and executes a contract with his local for standardizing and selling his products. The locals, in turn, join the exchange, help to finance it, and execute a contract covering the products they control.

The Disadvantages of This Plan - a. It is a little too loose. If the locals are formed in advance and not immediately federated into an exchange, it will be more or less difficult to federate them.

b. There is always considerable danger of the locals withdrawing from the exchange on slight provocation and continuing a separate existence or making other affiliations.

A number of exchanges organized on this plan are compelled to spend a considerable portion of their time and funds each year in holding various local associations in line.

The California Fruit Growers' Exchange and Gulf Citrus Exchange have overcome this difficulty to a large extent by describing the marketing plan of the exchange in the contract and specifying that the products are to be marketed through the exchange. With this provision, the contract is not binding on a grower if his local association withdraws from the central exchange. It is thus difficult for an association to proceed independently in case it withdraws and the tendency to withdraw on slight provocation is, therefore, largely removed.

c. In many associations organized on this plan, the contracts are not rigidly enforced.

No association can expect to live if it becomes loose in contract enforcement. Under this plan, the locals would have to enforce the contracts. The local board of directors will often hesitate to do this, both because they do not wish to arouse factional strife and because their finances sometimes will not permit.

The Advantage of This Plan—This plan is probably best, everything considered, for exchanges loosely spread over a relatively large area where the conditions vary in the different communities and in the commodities handled. Under these circumstances, the locals need more authority than in a more compact producing district.

### 3. Affiliate with Both Local Association and Central Exchange

There is a third plan of affiliation which, to a considerable degree, combines the valuable features of the two preceding plans and avoids their disadvantages. This plan is especially adapted to districts where fairly uniform conditions prevail or where the production is concentrated in a rather compact area.

Under this plan, the local association and central exchange are separately incorporated. Each grower joins both associations directly and gives his note or other form of security to his local association. The local association, in turn, assists in financing the central exchange, either on a uniform plan for all locals or in proportion to membership or tonnage. The grower directly contracts with the central exchange for standardizing and marketing his products.

This plan contemplates the locals as assembling associations, and the central as a standardizing and selling agency, which is what both are in practice anyway, no matter how organized.

This plan tends to make each grower feel more intimately a part of the central association than if his membership is indirect.

There is not so much tendency for locals to withdraw for slight provocation under this plan as under plan No. 2. If a local withdraws, it must practically reorganize its entire operations, in-

cluding the signing up of new contracts with growers. Under these circumstances, a local will not be likely to withdraw except for real cause.

The plan encourages a close bond of unity between the local and central organizations and discourages withdrawals, both of which are objects which all true cooperators should constantly strive for.

The central exchange will be more likely to enforce contracts than the various locals, and growers are likely to hesitate more in breaking a contract with a strong central exchange than with a weak local, especially with a legal form of contract and rigid policy of enforcement. This plan, furthermore, avoids the necessity of making a second set of contracts between the locals and the exchange, which requires considerable time and always raises questions of one kind or another.

Under this plan it is also quite easy to organize additional locals at any time, and the whole organization is entirely completed when the campaign is ended.

By-laws and contract for an exchange organized under this plan are presented in connection with this lesson.

#### LEGAL ADVICE FOR THE ORGANIZATION COMMITTEE

After the committee has agreed on a plan and put the details in the best form possible, they should place the material in the hands of a competent attorney. If no cooperative associations have previously been formed in your immediate vicinity, you may have considerable difficulty in finding an attorney who is sufficiently familiar with cooperative principles to be of the greatest service to you. In this case, you should get advice from an outside attorney.

Some attorneys will wish to organize your association on the same principles as an ordinary business

corporation. Be sure to see to it that in arranging the papers, the attorney does not violate any of the essential principles of cooperation.

### HOW TO ADOPT THE ORGANIZATION PLAN

The members of the committee should put their plan into effect as promptly as possible. If they have proper authority, they can incorporate the association and conduct the membership campaign without further meetings. It is usually better, however, to have a ratification meeting. Invite to this meeting the same persons as before and any others that may have shown interest since the previous meeting.

The same officers should serve as at the first meeting. The committee should itself present the plan. Outside persons should take part in the discussion when their advice is needed, but otherwise they should encourage the growers to take the initiative.

If reasonable changes are desired, which do not interfere with the principles of cooperation, by all means allow them. It often happens that some change will be desired which will be a violation of some cooperative principle. Use your influence against such a move. Get the growers to adopt a plan which is 100% cooperative. Use your influence to prevent any reservations.

As in the previous meeting, the secretary should record carefully all the details.

After the plan has been fully discussed, a vote should be taken on ratification. If favorable, a committee previously decided upon should be appointed, with authority to incorporate the association and conduct the campaign.

### HOW TO INCORPORATE

In many states, only three persons are necessary to form a corporation. They must file an application which gives the name, place of business, names of members of first board of directors, and the objects of the association. This application is usually filed with the secretary of state, together with a fee, and the secretary in time forwards the charter which authorizes the association to do business as a corporation.

In case of capital stock corporations, as previously mentioned, many states require that a certain part of the stock be sold and that a given proportion of this be paid in before an application can be filed. In this case, the growers should appoint an attorney and place him under bond.

The subscriptions and contracts for marketing are then executed for the proposed association in his name and he assigns the subscriptions and contracts to the corporation when organized.

The proper procedure for incorporation varies in the different states and competent legal advice should be secured on this point.

### HOW TO USE PUBLICITY

If the proper ground work has not already been laid, the organization committee may need to do further educational work. The nature and extent of this will depend upon conditions. In some localities, liberal newspaper publicity would be advisable, while in others it would not be. Circulars, maps, and charts often can be of material assistance in conducting meetings. Especially is this true when organizing a central exchange.

If a series of locals is being formed, a meeting should be held in each local community just previous



to the organization campaign. Contract and membership blanks and notes should always be on hand so as to sign up as many members at meetings as possible. Sometimes it is possible to practically complete the organization of a local at a meeting.

In organizing a district, special editions of newspapers can often be used to advantage. The organization committee can furnish a large mailing list and, for an edition of this kind, the managing editor can usually get plenty of advertising. Publishers can make a fair profit out of such editions and will, therefore, gladly print them. Such editions, besides containing some local news, can be filled with information favoring the cooperative movement.

If it is felt that some growers might not otherwise fully understand the objects of the association, it will be well to send out two or three letters to prospective members at intervals of a few days, a short time before they are solicited for membership.

### Whom to Select for Solicitors

Some growers will not attend meetings or read printed material and so it will be necessary to visit them in person and explain the objects of the proposed association. Only actual growers should be selected for soliciting work. They should be men of good standing in the community and thoroughly in sympathy with the cooperation.

In organizing an exchange, it is better to develop a few good men and use them in organizing all of the local associations than to develop a new set of men for organizing each local. It is difficult to find men well suited for this work, and it is not easy to train them. Furthermore, new men become discouraged much more easily than seasoned men.

### School of Instruction for Solicitors

A school of instruction should be conducted for the solicitors previous to the organization campaign.

Some leader who thoroughly understands cooperation in general and who is familiar with the plan of organization to be followed, should explain this in detail to the solicitors. The solicitors should be encouraged to ask questions on points they do not fully understand. The leader should tell them what questions are likely to be asked and how to answer them. Sometimes it is advisable for a trained solicitor to accompany a new man for a day or two in the field.

### METHODS OF SOLICITING

After signing up as many members as possible at meetings and in all other ways, the remaining prospects should be visited one by one. It is far better to visit them on their farms than on the road, in town, at church, or at a public sale. A grower who is familiar with the community and personally acquainted with the growers should accompany the solicitor and introduce him. The driver should, of course, join the association in advance. A good driver will not say too much, but he can be of a great deal of assistance to the solicitor by saying the right thing at the right time.

A strenuous effort should be made to sign up growers producing high quality products. It is far more important to control the products of high quality than to control the entire tonnage. There may actually be some poor quality tonnage which should not be encouraged to join the association.

The solicitor should have his papers in as convenient form as possible so as not to confuse prospective members. A set of by-laws should be carried along in order to explain questions which may arise.

In organizing non-profit associations, membership should be provided for in the contract. With this provision, only two signatures are necessary, one to the contract and one on the membership note. There should be as few signatures as possible.

In organizing capital stock associations, only two signatures are necessary, one to the contract and the other to the stock subscription blank. If a check or note is given in payment for stock, this will, of course, necessitate a third signature. Blank notes and checks should be carried for this purpose. A copy of the contract and, if possible, the by-laws, should be left with each grower.

#### HOW TO CONDUCT THE FINAL MEETING

After the organization campaign, it is often advisable to call a meeting in each community to inform the growers of the results and explain to them very frankly their responsibilities in making the new association a success.

If, in any community, a sufficient tonnage has not been signed to insure a successful local, it should be discontinued and the notes and contracts returned to the growers.

In some states, especially for capital stock associations, it is necessary to call a meeting of stockholders to elect directors and officers.

#### SUBSEQUENT ORGANIZATION WORK

The leaders of each local association should be supplied with membership blanks and contracts so that new members can be accommodated any time they wish to join. Frequently, after a season of success, another membership campaign can be conducted with excellent results.

### MANAGEMENT PLANS

After a cooperative is properly organized, the work is only half done. A capable manager must be selected and he and the traders must adopt a policy that will insure the success of the organization. Just what this policy should be will, of course, depend upon conditions. But how may those conditions be judged?

The next lesson treats of this subject and gives in detail the management plans that have been most useful in bringing about success.

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### GLOSSARY OF MARKETING TERMS USED IN THIS LESSON

capital stock corporation. An organization formed under the authority of a state charter, with membership indicated by the issuance of shares of stock on which it is expected that dividends will be paid.

federate, v. As used in this lesson, to combine several organizations into a larger organization, which will serve to further the objects of the smaller individual organizations.

incorporate, v. To form into a legal corporation.

ratification, n. The act of confirming or approving.

revolving fund. As used in this lesson, a sum of money set aside by a cooperative association to be used as a reserve fund. The money is accumulated by deducting a percentage of the returns from all shipments until the fund is deemed large enough, after which the amounts deducted are returned to the contributors. Thus, there is money constantly added to this fund, and after it has reached the proper size, there is money constantly deducted. Hence, it is given the name of "revolving fund."

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**Note:** This is part of the Marketing Dictionary supplied with this course.

**QUESTIONS FOR LESSON 13**

As soon as you have mastered this lesson, answer these questions and submit your answers to The American Institute of Agriculture, Chicago, Ill., for grading or correction.

Do not fail to write your name, address, and matriculation number plainly on each set of answers you send. Be sure to give the number or letter of the lesson, and the number of each question answered. Write the question in full before writing the answer. Be brief and explicit. Confine your answer to the length indicated, if possible. Use a typewriter, if you have one.

Answer all questions. If any are omitted, the omission will count against you.

- I. Name the four things that must be done by a leader to insure success of an organization campaign.
- II. In making a survey of the community to determine whether a cooperative is likely to be successful, what eight factors must be carefully studied?
- III. Suppose you are attempting to organize a central exchange, what should be the step taken before a meeting is actually called?
- IV. Why should organization proceed without delay after a survey has been made?
- V. Name at least two reasons why a non-profit, non-stock form of corporation is usually best for car-lot marketing associations at a distance from markets?
- VI. What are the two ways used for organizing a central association or exchange?
- VII. Name the advantages and disadvantages of a strongly organized exchange controlling shipping for an entire district.
- VIII. What are the advantages and disadvantages of federating local associations into a central exchange?
- IX. What are the advantages and disadvantages of an organization plan in which the individual growers join both the local and the exchange?
- X. What is probably the best way to insure the success of solicitors to enroll members?

**SUPPLEMENT TO FRUITS AND VEGETABLES LESSON 13**

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DOCUMENTS NEEDED FOR ORGANIZING

The by-laws, contracts, and other forms presented in this supplement are intended to contain only the essential principles of cooperative marketing associations. No one set of papers will apply to all plans. The conditions in each locality must be studied separately and the by-laws and contracts must be drawn up with the idea of meeting the existing conditions.

CONSTITUTION AND BY-LAWS  
OF THE

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ARTICLE I.

Section 1. NAME - The name of this organization shall be the \_\_\_\_\_

Section 2. PLACE OF BUSINESS - The principal office or place of business of this association shall be at \_\_\_\_\_

ARTICLE II. OBJECTS

The objects for which it is formed are:

To be an agricultural institution instituted for purposes of mutual help without having capital stock and not to be conducted for a profit;

To promote better and more economical methods of production;

To encourage uniformity in methods of production and in grading and packing the products of its members;

To cooperate and affiliate with other associations or corporations engaged in similar activities;

To provide agencies by which its members may secure the best results and the lowest possible costs in growing, handling, packing, inspecting, processing, storing, transporting, advertising, distributing, and marketing their products.

To purchase, prepare, or manufacture products for its members on a cooperative basis.

To cultivate the cooperative spirit in its territory.

To register, acquire, and use trade-marks and other emblems to distinguish the products of its members from those of other parties;

To enter into, make, form, or carry out contracts with any person, firm, corporation, or association for its members;

To acquire and operate loading stations, packing houses, and other property necessary for the best handling and disposition of the products of its members; and,

To have and exercise all the powers necessary and proper to carry into effect the purpose for which it is formed, and to do any and all things incident to the above objects.

### ARTICLE III. MEMBERSHIP

Section 1. QUALIFICATIONS - Each applicant shall be a producer of fruits or other farm products on a commercial basis, or a land owner leasing or renting his lands on a share basis.

Each applicant shall pay the membership fee; execute a contract in the form adopted by the board of directors, to market through the association the products named in said contract; and contribute his share of the credit, capital, or other regular investment, as decided upon by the board of directors.

Enjoyment of membership shall continue during good standing and behavior only.

All applications for membership shall be subject to approval of the board of directors.

Section 2. FEES - Each applicant for membership shall pay an initiation fee of (\$5), to be used



for such purposes as shall be deemed necessary and proper by the board of directors.

Each applicant for membership agrees that his initiation fee shall become and remain the exclusive property of the association free of any claim or demand upon his part, and constitutes merely evidence of good standing. The right to membership is personal and not a property right.

Section 3. MEMBERSHIP NOT TRANSFERABLE - Membership in the association shall not be transferable.

Section 4. The voting power of all members shall be equal. Each member shall have one vote and one vote only.

Section 5. TERMINATION - The death or retirement of a member from the business of farming shall automatically suspend his membership. Any member may cancel his membership at his option when the terms of his contract with the association have been met and after all indebtedness due from such member to the association has been fully paid.

Members may be expelled from membership for breach of contract or for acts injurious to the association. Three members of the board of directors or any officer shall notify the member in writing of the charges against him, at least fifteen days before the date of the proposed meeting, when the charges shall be considered by the board of directors. Upon vote by two-thirds of all the directors, whose decision shall be final, the member shall be denied further use of membership privileges, except to conclude unfinished transactions.

Section 6. Each member agrees that his membership shall or may be terminated in accordance with the provisions of the preceding section, subject to the liabilities he incurs as a member.

**ARTICLE IV. MEETINGS OF MEMBERS**

**Section 1. ANNUAL MEETINGS** - The annual meeting of the members shall be held during January of each year, the exact day, hour, and place to be decided by the board of directors. The annual meeting shall be held for the purpose of receiving the annual reports of officers and employees, for the election of directors, for the consideration of important questions of policy, and for the transaction of other business which may properly come before the meeting.

Notice of the annual meeting shall be mailed by the secretary to each member at his last address of record not less than seven days previous to the date of said meeting.

**Section 2. SPECIAL MEETINGS** - Special meetings of the members may be called at any time by the president; by the request of a majority of the board of directors; or by a request of twenty per cent (20%) of the members of the association. A notice of such special meeting shall be mailed by the secretary to each member at his last address of record at least five days before the date of such meeting, which notice shall state the nature of the business to be considered.

**Section 3. ADJOURNED MEETINGS** - If less than a quorum shall be present at any regular or special meeting of the members, said meeting may, after the lapse of at least one hour, be adjourned from time to time or from day to day by a majority vote of the members present; after three consecutive days, those present shall constitute a quorum.

Any meeting at which a quorum is present may also be adjourned until such time or upon such call as may be determined by a majority vote of those present.

At any adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted if the meeting had been held as originally called.

Section 4. QUORUM - At any regular or special meeting, duly called and held, a quorum shall consist of 20 per cent of the members in good standing.

Section 5. ORDER OF BUSINESS - The order of business at the annual meeting and, as far as possible, at all special meetings of the members, shall be as follows:

1. Calling of roll
2. Proof of due notice of meeting
3. Reading and disposal of any unapproved minutes
4. Reports of officers and committees
5. Election of directors
6. Unfinished business
7. New business
8. Adjournment

#### ARTICLE V. BOARD OF DIRECTORS

Section 1. ELECTION - The board of directors shall consist of (seven) members to be elected by majority vote at the annual meeting of members for a term of one year. Directors shall hold office until their successors shall have entered upon the discharge of their duties.

Vacancies shall be filled for the unexpired terms at any regular meeting or at any special meeting called for the purpose, in the manner provided for the original election of directors.

No regular employee of the association may be a member of the board of directors.

Section 2. REMOVAL - Any director of the association may for cause, at any regular meeting or at a special meeting called for the purpose, be removed from office by a two-thirds vote of the members present. Such director shall be notified by the secretary of the proposed meeting to hear charges at

least ten days before said meeting, and the notice shall specify the charges to be presented. Said director shall have an opportunity to appear in his own defense, either by person or attorney.

Any director who shall engage in buying and selling on his own account any of the kinds of products or supplies handled by the association shall forfeit his right to office, and if he refuses to resign shall be removed from office.

Section 3. MEETINGS - The board of directors shall hold monthly meetings at such time and place as shall be decided by the directors, and they may hold special meetings at any time upon the call of the president or upon petition of one-third of the directors.

Any kind of business may be transacted at a special meeting. No notice of regular meetings shall be necessary. The secretary shall notify directors of all special meetings at least 24 hours in advance. Attendance at any special meeting by a director shall constitute waiver of the required notice.

Section 4. QUORUM - A majority of the board of directors shall constitute a quorum at any regular or special meeting.

Section 5. POWERS AND DUTIES - The board of directors shall have power and it shall be their duty:

To exercise control over the business affairs of the association;

To make rules and regulations not inconsistent with law or these by-laws for the guidance of the affairs of the association and to amend or appeal same by majority vote;

To borrow money for the association to carry on its business and to give the association's note, deed, mortgage, or other obligation therefor;

To require good and sufficient corporation fidelity bonds of officers and employees who handle money, securities, or other things of value;

To fill vacancies in their own number by majority vote until the next annual meeting of the members.

**Section 6. LIMITATION OF POWERS** - Rules and regulations which the board of directors shall issue from time to time shall constitute by reference a part of these by-laws and shall be binding upon the members of this association and upon anyone doing business with this association. The powers of all officers and agents of this association are limited powers and any acts of officers or agents in excess of their authority shall not be binding upon this association.

**Section 7. ORDER OF BUSINESS** - The order of business at any regular or special meeting of the board of directors shall be as follows:

1. Reading and disposal of any unapproved minutes
2. Reports of officers
3. Reports of committees
4. Unfinished business
5. New business
6. Adjournment

## ARTICLE VI. OFFICERS

**Section 1. ELECTION** - Within ten days following each annual meeting, the directors shall hold a meeting and shall elect a president, vice-president, secretary, and treasurer; provided, however, that the offices of the secretary and treasurer may be combined into that of secretary-treasurer if desired. The offices of secretary and treasurer may also be organized into those of recording secretary and financial secretary upon the option of the board of directors. All officers shall be members of the board of directors except the secretary and treasurer, who may or may not be directors. The officers shall assume their duties immediately after election.

Section 2. DELEGATION OF POWERS – In case of the absence of any officer, or for any other reason that the board may deem sufficient, the board of directors may delegate the powers and duties of such officer to any other officer or to any director for a stated time, provided that a majority of the entire board of directors concurs therein.

Section 3. REMOVAL – Any officer may be removed for cause in the same manner as designated in Article V. for the removal of directors.

Section 4. PRESIDENT – The President shall:

Preside over all meetings of the directors and members;

In case of a tie, cast the deciding vote;

Execute personally or through a duly authorized representative in behalf of the association all contracts, deeds, certificates of membership or other instruments which have been approved by the board of directors;

Have general supervision and administrative control of the affairs of the association;

Call the directors or members together in special meetings whenever he deems it necessary.

Section 5. VICE-PRESIDENT – In the absence or disability of the president, his duties shall devolve upon and be discharged by the vice-president.

Section 6. SECRETARY – The secretary shall:

Keep a record of the proceedings of the meetings of the board of directors and of the members;

Keep the corporate seal of the association and affix same to all papers requiring a seal;

Keep an account of the members of the association, including dates of admission, payment of dues, withdrawals, and rejections;

Serve all notices required by law or by these by-laws; in case of his absence, inability, refusal or neglect to do so, then such notices may be served by any person thereunto directed by the president or vice-president of the association;

File all letters, cashed checks, records and other valuable material;

Present to the board of directors each month a statement of the business conditions of the association, including the progress during the preceding month;

Attend the annual meeting of the association and present a complete record of the previous year's business.

Section 7. TREASURER - The treasurer shall:

Receive and deposit all funds of the association in such bank or other depository as shall be designated by the board of directors;

Deposit all funds in the name of the association and withdraw therefrom only by the check of the association signed by such person as shall be authorized so to do by the board of directors;

Deposit to the credit of the association all interest received on funds of the association;

Keep an accurate account of receipts and disbursements and submit a monthly report of same to the board of directors, or oftener, if requested;

Submit a complete report for the fiscal year at each annual meeting of members.

## ARTICLE VII. STANDARDIZATION OF PRODUCTS

Section 1. The association shall make provision for inspection service or shall establish packing

houses at convenient places. And the members shall harvest and deliver to the association all the products specified in their contracts, in seasonable time and in first-class merchantable condition.

In the case of products for which inspection service is provided, the grower agrees to harvest, handle, grade, pack, and deliver his products to one of the receiving stations of the association and to abide by the decision of the inspector. In the case of products for which a packing house is operated, the grower agrees to harvest, handle, and deliver his products to the packing house in good merchantable condition and to allow the association or its duly authorized agents to grade, pack, and standardize his products. Any loss occasioned by improper harvesting, handling, grading, or packing, on the part of the grower, shall be borne by him.

All inspection or grading and packing of products shall be done in accordance with rules and regulations to be established by the association and subject to revision from time to time as conditions shall seem to justify.

#### ARTICLE VIII. POOLING

Section 1. In making sales, all products of the same grade may be mingled or pooled by varieties, or in such quantities, or for such periods, as the board of directors may decide, and all growers of the same grade, for a given pool, shall receive the average price received, less handling charges. Payments shall be made to the growers as soon as possible after the returns are received or at the end of the period for which a given pool extends. In case of pools extending over a period of time, partial payments may be made at intervals as the returns are received, the amount and time of payment to be decided by the board of directors.



**ARTICLE IX. PURCHASE OF SUPPLIES**

Section 1. The association may at the discretion of the board of directors purchase supplies for its members and others. So far as possible, members shall be encouraged to place their orders in advance for such supplies and accompany same with a deposit. The association may also carry in stock such supplies as shall be decided upon by the board of directors. Supplies ordered in advance may be handled for members at a lower service charge than supplies carried in stock.

**ARTICLE X. FINANCE**

Section 1. HANDLING CHARGES - For the purpose of meeting the current expenses of the association, the board of directors shall have authority to fix handling charges for the purchase of supplies and the marketing of products. Such charges shall be fixed on as fair and equitable a basis as is possible and shall be subject to change from time to time. Said charges shall include the expenses of handling, storing, and distributing supplies and the handling, inspection, grading, packing, storing, and marketing of products, including the overhead expenses of the association and any amounts which can be charged for services by agents of the association.

The association shall keep a detailed account of the transactions of members and if the amounts collected as handling charges are found at the end of the fiscal year to be more than is needed by the association for rendering its services, a proportionate refund shall be made.

Section 2. MEMBERSHIP NOTE - Each member on joining the association shall execute a demand note without interest for one hundred dollars (\$100.00), payable to the association, for the purpose of enabling the association to borrow money to properly conduct the business of each and all its members. The association may use said note as collateral and

also as indemnity in case of breach of the marketing contract. The membership notes shall be returned to members when the revolving fund, described in Section 3 hereof, shall equal the amount fixed by the board of directors.

Section 3. REVOLVING FUND - For purpose of acquiring property and accumulating a working fund, a revolving fund shall be established. An amount not to exceed 5% shall be deducted from the net returns from products marketed through the association; and said amounts shall be placed in the revolving fund.

When the revolving fund shall have equalled the amount deemed necessary or advisable by the board of directors, the excess accumulated thereafter shall be used to redeem the outstanding interests of members in the revolving fund, said interests to be redeemed in the order of their creation and all payments to be made annually.

Contributions to the revolving fund shall be credited as obligations on the books of the association. Withdrawal or expulsion of a member shall not affect his interest in the revolving fund or the time or conditions of redemption thereof. The interests of members in the revolving fund shall in all cases be subordinate to the obligations of the association to other creditors.

## ARTICLE XI. SUNDRY PROVISIONS

Section 1. No member shall market products through the association for persons not members of the association, except for his own share-basis tenants.

Section 2. Each member shall report to the association when requested, such information concerning the acreage, varieties, and condition of his crops as the association or its agent may decide upon, on forms to be provided by the association.

**Section 3.** Any member shall have the right to give away, or retain for his own use, such of his products as he may wish, but he shall not make sale of crops promised by contract to the association to any outside party or parties for resale, except on approval of the association.

**Section 4.** Any member feeling that he had a grievance or cause for complaint, may appeal to the board of directors or to the members at any regularly called meeting.

**Section 5.** The association may market products and purchase supplies for members of other associations cooperating with it on the same terms as for members.

## **ARTICLE XII. COOPERATION AND AFFILIATION**

The association shall have authority to cooperate and affiliate by membership, contract, or otherwise, with other associations, corporations, or individuals when in the opinion of the board of directors greater efficiency will thereby result in the marketing of products or the purchase of supplies.

## **ARTICLE XIII. ACCOUNTING AND AUDITING**

**Section 1.** The association shall install such accounting system and office equipment as shall be necessary to conduct the business in a safe and orderly manner.

**Section 2.** The books and business of the association shall be audited by a competent accountant previous to the date of the annual meeting. A written report of such audit shall be presented in full to the members at the annual meeting. Special audits may be made in addition upon order of the board of directors or upon vote of a majority of the members present at any regular or special meeting.

Section 3. A balance sheet showing the financial condition of the association shall be mailed annually to each member of the association.

Section 4. The books and business of the association shall be subject to inspection by members at any time within reasonable business hours.

#### ARTICLE XIV. FISCAL YEAR

Section 1. The fiscal year of the association shall be the calendar year.

#### ARTICLE XV. CORPORATE SEAL

Section 1. The board of directors shall provide a suitable seal containing the name of the association, the date of its incorporation, and other appropriate words or emblems.

#### ARTICLE XVI. AMENDMENTS

Section 1. The articles of incorporation and by-laws of the association may be amended at any regular or special meeting of the members, providing that a quorum be present and that two-thirds of the members present vote in favor of said amendment or amendments.

### CONTRACT BETWEEN A GROWER AND HIS LOCAL ASSOCIATION

Form B

No. \_\_\_\_\_

#### MARKETING CONTRACT

This agreement, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_ A. D. 192\_\_\_\_, between the \_\_\_\_\_ a corporation organized under and by virtue of the Laws of the State of \_\_\_\_\_, having its principal office in the City of \_\_\_\_\_, County of \_\_\_\_\_, and State of \_\_\_\_\_, (hereinafter referred to as the ASSOCIATION), and the undersigned grower of fruits or other farm products, residing in the County of \_\_\_\_\_, and State of \_\_\_\_\_, (hereinafter referred to as the GROWER),

**WITNESSETH: THAT WHEREAS,** it has been deemed advantageous and advisable by the parties designated as GROWER or GROWERS, in this and other agreements generally similar in terms, to associate themselves together for the purpose of collectively meeting and solving the problems of growers of fruit and other farm products, and especially for the purpose of developing more orderly and efficient methods of standardizing, marketing, and selling such products;

**NOW, THEREFORE, THIS AGREEMENT FURTHER WITNESSETH:** That for and in consideration of the sum of One Dollar (\$1.00), the receipt of which is hereby acknowledged, and in further consideration of the mutual covenants and agreements herein contained, and of similar obligations assumed by other members, also designated as GROWERS, it is hereby agreed by and between the parties hereto, as follows:

#### SALE OF PPRODUCTS

The GROWER hereby appoints the ASSOCIATION his sole and exclusive agent, coupling such agent with a direct financial interest as the common agent of other growers with similar agreements, for the handling, standardizing, and marketing of all

(except products sold directly to consumers) which may be grown, owned, or controlled by the GROWER, whether as landlord, tenant, or otherwise, upon any land now or later owned or controlled by the GROWER, situated in the County \_\_\_\_\_ of \_\_\_\_\_; and the grower authorizes the ASSOCIATION, as his agent, to warrant and pass title to the aforesaid products to parties buying such products from the ASSOCIATION, and to pledge, mortgage, or hypothecate all or any portion of the products delivered by the GROWER to such persons, firms, corporations, or other organizations, upon such conditions and terms as in its judgment will best promote the interests of the GROWERS. The ASSOCIATION agrees to act as such agent.

#### MARKETING PLAN

It is understood by both parties that the marketing plan of the ASSOCIATION is part of a general plan, consisting of various local associations and the Exchange. The purpose of the local association, among others, is to receive, handle, inspect, grade,

pack, load, and ship the products under contract, and the purpose of the Exchange, among others, is to exercise supervision over all standardization of products and to have charge of the sales and distribution service. The GROWER approves this plan and desires to assist in developing, protecting, promoting, and furthering it; and it is therefore agreed that the products herein named are to be marketed by the ASSOCIATION through said.....Exchange.

### TERMINATION OF CONTRACT

This contract shall be in full force and effect for a period of ten years from and after.....192..., unless cancelled by written notice from either party to the other between March 15 and April 1 of any year after the first three years; provided that the GROWER hereby relinquishes his right to cancel this contract, or his membership in the ASSOCIATION, as long as he may be indebted in any manner to the ASSOCIATION; such right to cancellation shall furthermore be subject to any incomplete sales or transactions covering products grown the previous season and to the liabilities the GROWER assumes as a member of the ASSOCIATION.

### MEMBERSHIP

Signature to this contract constitutes application by the GROWER for membership in the ASSOCIATION and the.....Exchange, and a receipt for the membership fees shall be conclusive evidence of membership therein; the GROWER agrees to abide by the by-laws, rules and regulations of the ASSOCIATION and the.....Exchange now or hereafter in effect, all of which are hereby made a part of this contract. The GROWER authorizes the ASSOCIATION and .....to cooperate or affiliate in any lawful manner with other associations or corporations for the purpose of developing more efficient methods of marketing the aforesaid products. The GROWER authorizes the ASSOCIATION to deduct not to exceed 50 cents per year from his membership dues or returns, for subscription to the official organ of the.....Exchange.

### STANDARDIZATION

The ASSOCIATION agrees to make provision, either directly or through duly authorized agents, for inspection service, or to establish one or more pack-

ing houses ; and the GROWER agrees to harvest and deliver to the ASSOCIATION, all the products named above, in seasonable time and in first-class merchantable condition.

In the case of products for which inspection service is provided, the GROWER agrees to harvest, handle, grade, and pack his products, to deliver same at the receiving station of the ASSOCIATION, and to abide by the decision of the Inspector as to the grading of said products ; in the case of products for which a packing house is operated the GROWER agrees to harvest and deliver his products to the packing house in good merchantable condition, for grading, packing, and standardizing by the ASSOCIATION or its authorized agent. Any deduction, charge, or loss that the ASSOCIATION may suffer on account of inferior grade, pack, or condition at delivery shall be charged against the GROWER individually, and the determination of the ASSOCIATION as to grade, pack, classification, and differentials in prices, shall be conclusive.

Both parties agree that all inspection or grading and packing of products shall be done in accordance with rules and regulations to be established by the ASSOCIATION and subject to revision from time to time.

### POOLING

The GROWER expressly authorizes the ASSOCIATION to mingle or pool his products with those of similar kind, variety, and grade delivered by other growers, and the proceeds of any or all sales thereof may be pooled with the proceeds of sale of any other products of like kind, variety, and grade marketed by the ASSOCIATION during such periods or in such quantities as the ASSOCIATION shall from time to time determine ; and the GROWER shall receive the same average price per package or other unit, as all other contributors to a given pool, for the same kind, variety, and grade of products.

### RETURNS AND SERVICE CHARGES

The ASSOCIATION agrees to account for and deliver to the GROWER, either directly or through its authorized agent, his share of the proceeds resulting from the sale of each pool of products marketed by the ASSOCIATION, after deducting the service charges hereinafter provided, as promptly as practicable

after their receipt. The GROWER agrees to pay the ASSOCIATION its regular charges for service in handling, inspecting, grading, packing, storing, marketing, and overhead expenses, including the charges of its agents, and any amount which may be set aside by the ASSOCIATION or its agents for reserve or equipment; such charges shall be fixed by the ASSOCIATION from time to time. The GROWER authorizes the ASSOCIATION to deduct from his share of the proceeds resulting from the sale of products the amounts necessary to cover such charges.

### LIQUIDATED DAMAGES

This agreement is one of a series generally similar in terms, comprising, with all such agreements signed by individual growers, one single contract between the ASSOCIATION and such GROWERS, mutually and individually obligated under all the terms hereof. The ASSOCIATION shall be deemed to be acting, in its own name, for all such GROWERS in any action or legal proceeding on or arising out of this agreement.

Inasmuch as the remedy at law would be inadequate, and inasmuch as it is now and ever will be impracticable and extremely difficult to determine the actual damage resulting to the ASSOCIATION should the GROWER fail so to sell and deliver all of the products herein named, the GROWER hereby agrees to pay to the ASSOCIATION for all products delivered, sold, consigned, or marketed by or for him other than in accordance with the terms hereof, the following:

Apples, 25 cents per bushel.....

Peaches, 25 cents per bushel.....

Pears, 15 cents per bushel.....

as liquidated damages for violation of this contract; all parties agreeing that this contract is one of a series dependent for its true value upon the adherence of each and all the GROWERS to each and all of the said agreements. Any property of the GROWER in the custody of the ASSOCIATION shall be subject to a lien for any claim or claims due the ASSOCIATION.

The GROWER further agrees that upon violation or threatened violation of any provision of this agreement, the ASSOCIATION shall be entitled to an injunction to prevent breach or further breach thereof, and to an injunction requiring specific



performance thereof, and to such other relief in equity as the law may permit.

In the event it is necessary to bring any legal action against the GROWER to compel him to perform his obligations under this contract, the GROWER agrees to pay to the ASSOCIATION all expenditures for bonds, investigations, travel, court costs, etc., including reasonable attorneys' fees for the prosecution of such action; all such expenditures to be determined by the court and included in any judgment or decree rendered by such court.

IN WITNESS WHEREOF, said ASSOCIATION has caused these presents to be signed by its President and has caused its seal to be hereunto affixed, attested by its Secretary, and the GROWER has hereunto set his hand and seal the day and year first above written.

.....  
 (Name of Association)  
 By..... (SEAL)  
 President  
 ..... (SEAL)  
 Grower

Attest:

..... (SEAL)  
 Secretary

### CONTRACT BETWEEN A LOCAL ASSOCIATION AND EXCHANGE AGREEMENT

This agreement, made and entered into this.....  
 ....., 19..., between the.....  
 .....Exchange, a corporation  
 organized under and by virtue of the act of the State  
 of.....having its principal office  
 in the City of.....County of.....  
 and State of.....(hereinafter  
 referred to as the EXCHANGE), and the.....  
 .....Association, a corporation  
 organized under and by virtue of the laws of the State  
 of.....having its principal office in  
 the City of.....County of.....  
 and State of..... (hereinafter re-  
 ferred to as the ASSOCIATION);

WITNESSETH: That for and in consideration of the sum of One Dollar (\$1.00), the receipt of which is hereby acknowledged, and in further consideration

of the covenants and agreements herein set forth, it is agreed by and between the parties as follows:

1. The Association appoints the Exchange as its sole and exclusive agent, coupling such agent with a direct financial interest as the common agent of other associations with similar agreements, for the standardizing, distributing, and selling of all..... (except such products as shall mutually be agreed upon) now controlled by the Association, or which may hereafter come under the control of the Association, during the term of this Agreement; and the Association authorizes the Exchange, as its agent, to warrant and pass title to the aforesaid products to parties buying such products from the Exchange, and to pledge, mortgage, or hypothecate all or any portion of the products herein named to such persons, firms, corporations, or organizations upon such terms and conditions as in its judgment will best promote the interests of the growers of said products. The Exchange agrees to act as such agent.

2. This Agreement shall remain in full force and effect for a period of 10 years from and after ....., 19..., provided that either party may cancel the Agreement between March 15 and April 1 of any year after the first three years, by giving written notice to the other party of the desire to cancel. Upon such notice, each party shall pay to the other any indebtedness due, but such termination shall not affect any incompleted sales or transactions between the parties hereto, or release either party from any obligations then unpaid or thereafter accruing under this Agreement, or release the Exchange from the obligation of marketing, or the Association from marketing through the Exchange, all products grown during the previous season.

3. The Association agrees to furnish such information regarding the acreage, varieties, and crop conditions of its members as may be requested by the Exchange; to inform the Exchange in advance as to time and place of shipment of its products; and to furnish the Exchange with a correct list of its members, and to notify the Exchange monthly of any changes in such list.

4. The Association agrees to provide one or more packing houses or other proper facilities for handling the products of its members, and to adopt

rules and regulations for grading, packing, and inspection of products in accordance with the by-laws, rules, and regulations of the Exchange.

5. It is agreed by the above parties that all inspection and standardization service shall be under the general direction and control of the Exchange, and all brands and labels used shall be provided or approved by the Exchange.

6. The Association expressly authorizes the Exchange to mingle or pool the products under its control with those of similar kind, variety, and grade delivered by other associations or growers, and the proceeds of any or all sales thereof may be pooled with the proceeds of sale of any other products of like kind, variety, and grade marketed by the Exchange during such periods or in such quantities as the Exchange shall from time to time determine.

7. The Exchange agrees to account for and deliver to the Association its share of the proceeds resulting from the sale of each pool of products marketed by the Exchange, after deducting the service charges herein provided, as promptly as practicable after the sale of each pool of products is completed. The Association agrees to pay the Exchange its regular charges for service in standardizing, distributing, marketing, and overhead expenses, including the charges of its agents and any amounts which may be set aside by the Exchange or its agent for reserve or equipment; such charges shall be fixed by the Exchange from time to time. The Association authorizes the Exchange to deduct from its share of the proceeds resulting from the sale of products the amounts necessary to cover such charges. If the charges of the Exchange are found at the end of any season to be more than is needed to render its services, including any amounts set aside for reserve, equipment, or other purposes deemed advisable, a proportionate refund shall be made.

8. In consideration of the mutual covenants herein set forth, the Association agrees to deliver to the Exchange, in the form of a loan, security or funds, an amount not to exceed.....dollars for each of its grower members, and to renew the said security annually according to its membership, or oftener if so requested by the Exchange. Said security or funds are to be used by the Exchange to carry out its purposes, and shall also be available for

securing in part any loss the Exchange and its members may suffer by reason of the Association violating the terms of this Agreement.

9. The Association agrees to pay to the Exchange as liquidated damages the sum of.....cents per bushel (box or crate) for all products which are sold, delivered, consigned, or marketed by or for it other than in accordance with the terms of the Agreement; all parties agreeing that this Agreement is one of a series dependent for its true value upon the adherence of each and all of the associations to each and all of the said agreements.

IN WITNESS WHEREOF, each of the above parties has caused these presents to be signed by its respective president, and caused its seal to be hereunto affixed, attested by its secretary, the day and year first above written.

.....  
(Name of Exchange)

BY.....PRESIDENT

ATTEST:

BY.....SECRETARY

.....  
(Name of Association)

BY.....PRESIDENT

ATTEST:

BY.....SECRETARY

### CONTRACT BETWEEN GROWER AND EXCHANGE

(For use when the Double Membership Plan of Organization is Used.)

Form A

No. \_\_\_\_\_

### MARKETING CONTRACT

This agreement, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_ A. D. 192\_\_\_\_, between the \_\_\_\_\_ a corporation organized under and by virtue of the \_\_\_\_\_ act of the State of \_\_\_\_\_, having its principal office in the City of \_\_\_\_\_, County of \_\_\_\_\_, and State of \_\_\_\_\_ (hereinafter referred to as the EXCHANGE), and the undersigned grower of fruits or other farm products, residing in the County of \_\_\_\_\_ and State of \_\_\_\_\_. (hereinafter referred to as the GROWER).

**WITNESSETH: THAT WHEREAS,** it has been deemed advantageous and advisable by the parties designated as GROWER or GROWERS, in this and other agreements generally similar in terms, to associate themselves together for the purpose of collectively meeting and solving the problems of growers of fruit and other farm products, and especially for the purpose of developing more orderly and efficient methods of standardizing, marketing, and selling such products;

**NOW, THEREFORE, THIS AGREEMENT FURTHER WITNESSETH:** That for and in consideration of the sum of One Dollar (\$1.00), the receipt of which is hereby acknowledged, and in further consideration of the mutual covenants and agreements herein contained, and of similar obligations assumed by other members, also designated as GROWERS, it is hereby agreed by and between the parties hereto, as follows:

#### SALE OF PRODUCTS

The GROWER hereby appoints the EXCHANGE his sole and exclusive agent, coupling such agent with a direct financial interest as the common agent of other growers with similar agreements, for the handling, standardizing, and marketing of all

(except products sold directly to consumers) which may be grown, owned, or controlled by the GROWER, whether as landlord, tenant, or otherwise, upon any land now or later owned or controlled by the GROWER, situated in the Count \_\_\_\_\_ of \_\_\_\_\_; and the GROWER authorizes the EXCHANGE, as his agent, to warrant and pass title to the aforesaid products to parties buying such products from the EXCHANGE, and to pledge, mortgage, or hypothecate all or any portion of the products delivered by the GROWER to such persons, firms, corporations, or other organizations, upon such conditions and terms as in its judgment will best promote the interests of the GROWERS. The EXCHANGE agrees to act as such agent.

#### TERMINATION OF CONTRACT

This contract shall be in full force and effect for a period of ten years from and after....., 192..., unless cancelled by written notice from either party to the other between March 15 and April 1 of any year after the first three years, provided that the GROWER hereby relinquishes his right to cancel this

contract, or his membership in the EXCHANGE, as long as he may be indebted in any manner to the EXCHANGE; such right to cancellation shall furthermore be subject to any incomplete sales or transactions covering products grown the previous season and to the liabilities the GROWER assumes as a member of the EXCHANGE.

#### MEMBERSHIP

Signature to this contract constitutes application by the GROWER for membership in the EXCHANGE and the local association which he elects to join, and a receipt for the membership fees shall be conclusive evidence of membership therein; the GROWER agrees to abide by the by-laws, rules, and regulations of the EXCHANGE and the local association, now or hereafter in effect, all of which are hereby made a part of this contract. The GROWER authorizes the EXCHANGE to co-operate or affiliate in any lawful manner with other associations or corporations for the purpose of developing more efficient methods of marketing the aforesaid products. The GROWER authorizes the EXCHANGE to deduct not to exceed 50 cents per year from his membership dues or returns, for subscription to the official organ of the EXCHANGE.

#### STANDARDIZATION

The EXCHANGE agrees to make provision, either directly or through the local associations, for inspection service, or to establish packing houses; and the GROWER agrees to harvest and deliver to his local association, which shall act as agent for the EXCHANGE, all the products named above, in seasonable time and in first-class merchantable condition.

In the case of products for which inspection service is provided, the GROWER agrees to harvest, handle, grade, and pack his products, to deliver same at one of the receiving stations of the EXCHANGE, and to abide by the decision of the Inspector as to the grading of said products; in the case of products for which packing houses are operated, the GROWER agrees to harvest and deliver his products to the packing house most convenient to him, in good merchantable condition, for grading, packing and standardizing by the EXCHANGE or its authorized agent. Any deduction, charge, or loss that the EXCHANGE or local association may suffer on account of inferior grade, pack, or condition at delivery shall be charged against the GROWER individually, and

the determination of the EXCHANGE as to grade, pack, classification, and differentials in prices, shall be conclusive.

Both parties agree that all inspection or grading and packing of products shall be done in accordance with rules and regulations to be established by the EXCHANGE and subject to revision from time to time.

#### POOLING

The GROWER expressly authorizes the EXCHANGE to mingle his products with those of similar kind, variety, and grade delivered by other growers, and the proceeds of any or all sales thereof may be pooled on a proportional basis with the proceeds of sale of any other products of like kind, variety, and grade marketed by the EXCHANGE during such periods or in such quantities as the EXCHANGE shall from time to time determine.

#### RETURNS AND SERVICE CHARGES

The EXCHANGE agrees to account for and deliver to the GROWER, either directly or through his local association, his share of the proceeds resulting from the sale of products marketed by the EXCHANGE, after deducting the service charges hereinafter provided, as promptly as practicable after their receipt. The GROWER agrees to pay the EXCHANGE its regular charges for service in handling, inspecting, grading, packing, storing, marketing, and overhead expenses, including the charges of the local association, and any amounts which may be set aside by the local association and EXCHANGE for reserve or equipment; such charges shall be fixed by the EXCHANGE and local association from time to time. The GROWER authorizes the EXCHANGE and local association to deduct from his share of the proceeds resulting from the sale of products the amounts necessary to cover such charges.

#### LIQUIDATED DAMAGES

This agreement is one of a series generally similar in terms, comprising, with all such agreements signed by individual growers, one single contract between the EXCHANGE and such GROWERS, mutually and individually obligated under all the terms hereof. The EXCHANGE shall be deemed to be acting, in its own name, for all such GROWERS in any action or legal proceeding on or arising out of this agreement.

Inasmuch as the remedy at law would be inadequate, and inasmuch as it is now and ever will be impracticable and extremely difficult to determine the actual damages resulting to the EXCHANGE should the GROWER fail so to sell and deliver all of the products herein named, the GROWER hereby agrees to pay to the EXCHANGE for all products delivered, sold, consigned, or marketed by or for him other than in accordance with the terms hereof, the following:

Apples, 25 cents per bushel.....

Peaches, 25 cents per bushel.....

Pears, 15 cents per bushel.....

as liquidated damages for violation of this contract; all parties agreeing that this contract is one of a series dependent for its true value upon the adherence of each and all the GROWERS to each and all of the said agreements. Any property of the GROWER in the custody of the EXCHANGE shall be subject to a lien for any claim or claims due the EXCHANGE.

The GROWER further agrees that upon violation or threatened violation of any provision of this agreement, the EXCHANGE shall be entitled to an injunction to prevent breach or further breach thereof, and to an injunction requiring specific performance thereof, and to such other relief in equity as the law may permit.

In the event it is necessary to bring any legal action against the GROWER to compel him to perform his obligations under this contract, the GROWER agrees to pay to the EXCHANGE all expenditures for bonds, investigations, travel, court costs, etc., including reasonable attorneys' fees for the prosecution of such action; all such expenditures to be determined by the court and included in any judgment or decree rendered by such court.

IN WITNESS WHEREOF, said EXCHANGE has caused these presents to be signed by its President and has caused its seal to be hereunto affixed, attested by its Secretary, and the GROWER has hereunto set his hand and seal the day and year first above written.

.....EXCHANGE (SEAL)

By.....(SEAL)

President

.....(SEAL)

Grower

Attest:

.....(SEAL)

Secretary



**QUESTIONS FOR SUPPLEMENT TO F & V LESSON 13**

As soon as you have mastered this lesson, answer these questions and submit your answers to The American Institute of Agriculture, Chicago, Ill., for grading or correction.

Do not fail to write your name, address, and matriculation number plainly on each set of answers you send. Be sure to give the number or letter of the lesson, and the number of each question answered. Write the question in full before writing the answer. Be brief and explicit. Confine your answer to the length indicated, if possible. Use a typewriter, if you have one.

Answer all questions. If any are omitted, the omission will count against you.

- I. According to the constitution suggested in the supplement as a typical constitution for fruit and vegetable cooperative associations, what are the requirements for membership?
- II. Describe briefly the powers and duties of the board of directors of a fruit and vegetable cooperative marketing association.
- III. What requests are made of the association in the constitution published in this supplement, for the standardization of the products it handles?
- IV. How does the constitution provide for a fair division of returns?
- V. What provision is made for financing?
- VI. In the contract recommended to be used between a grower and his local association, just how is the association given control over the selling of all of the products of the producer to be sold, with the exception of those sold direct to consumers?
- VII. In the marketing contract, for what length of time is the grower bound?
- VIII. What provision is made for liquidating damages?
- IX. What principal service does an exchange perform for a local association?
- X. What is the essential difference in the service rendered to the grower by a local association and that rendered to the grower by an exchange, when the double membership plan of organization is used?











# How to Manage a Cooperative Fruit and Vegetable Marketing Association

By C. E. DURST



MARKETING FRUITS AND VEGETABLES  
LESSON 14

Confidential Edition  
Issued for Members

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The American Institute of Agriculture  
CHICAGO





## HOW TO STUDY THIS LESSON

Whether you are a manager, a director, or an individual member of a cooperative association, you should be thoroughly familiar with successful methods of operation. As an individual member, you ought to be able to recognize what has caused any unfavorable conditions that may be apparent in your organization.

As a director, you are responsible for the success of the association, and as manager, you are responsible to the directors for the details of marketing.

It is important that you study this lesson at least three separate times, each time with one of these conditions in mind. That is, study once as a grower, for the purpose of learning what your association should do. You should study as a member of the board of directors, to learn what the other members will expect of you and what you can do to make the association a success. Then study from the viewpoint of a manager.

After knowing what the growers will expect and what directors will be likely to do, you will be much better prepared to work out operating policies that will not only be successful but that will be satisfactory to both growers and directors.

The lesson gives complete information for all three of these classes of men. But you will find it difficult to attempt to observe everything from the three viewpoints at one reading. If possible, test your knowledge and your opinions resulting from a study of this lesson by talking with those who are engaged in the management of a cooperative enterprise.

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## HOW TO MANAGE A COOPERATIVE

BY C. E. DURST\*

Inexperienced persons may regard the work of forming a cooperative association as largely finished when the membership campaign is ended. As a matter of fact, the work is only well started when sufficient members have been obtained.

True cooperation is not a simple proposition. It includes all the business principles that are common to business institutions in general, and, in addition to this, there are problems of handling people and in getting them to work together harmoniously that are not found in any other kind of organization. The development of a cooperative association is, therefore, a somewhat complicated matter and should be approached with care and understanding.

### THE DIRECTORS AND THEIR DUTIES

A great deal will depend on the directors and they should be selected most carefully. This is especially true in the case of a new association. The directors should be the ablest men in the community or district. They should fairly well represent the different parts of the territory. They should have the complete confidence of the growers. They should be men who will be willing to give time to the affairs of the association; who will attend meetings regularly; who are thoroughly in sympathy with cooperation, and who will work together in harmony.

It is sometimes advisable to include a local banker or successful business man on the board of

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\*Secretary of the Federated Fruit Growers, Inc., for complete statement of his experience, see Lesson 12

directors, especially in the early life of the association.

It is usually better to appoint a nominating committee to survey the field and make recommendations than to have the nominations made offhand in a meeting. A committee can take all of the important factors into consideration, whereas some of them will almost surely be overlooked if nominations are made spontaneously.

Directors are generally responsible for the affairs of the association, both to the state and to the members. Therefore, they should take their positions most seriously. Occasionally a director will look upon his position as an honorary matter. This is most unfortunate for the association.

Each director should familiarize himself with his duties under the state laws, and the by-laws of the association. If he does not feel that he can properly carry out his duties, he will do both the association and himself a service by resigning.

When the association is started, a number of important matters must be acted upon, and an attorney or other well informed person should be present. For instance, most state laws provide that the by-laws must be adopted by the directors and that the directors must authorize the borrowing of all moneys. It is important that all of these matters be properly attended to and recorded from a legal standpoint, for otherwise the association may later face serious difficulties.

Quite commonly the by-laws authorize the directors to adopt a form of contract; to make rules and regulations for grading; to determine the amount of the handling charges; and so on. Such matters also must be properly attended to and recorded, for they are in effect parts of the by-laws and contract.

To be of the most service, the directors and officers must keep themselves informed in regard to the business affairs of the association as it progresses. They can do this only by visiting the association often, by asking questions, and by requiring a detailed report monthly or oftener of the condition of the business, financial and otherwise.

A good manager will gladly make such reports. Any other kind of manager should be compelled, if necessary, to adopt regular methods. Many associations have suddenly been found in bad condition financially through neglect of the manager to make definite reports and failure of the directors to require them.

### Election of Officers

Most state laws provide that the directors shall elect their own officers. In this case, the directors should meet within the time specified in the by-laws or in the state law and elect their officers.

### HOW TO SELECT A GOOD MANAGER

One of the most important duties of the directors and officers is to employ a competent manager.

The manager of a cooperative association must be thoroughly in sympathy with cooperation. He should understand the growers' viewpoint. A man who was formerly a dealer or speculator in fruits and vegetables, will rarely make a good cooperative manager, because he is almost certain to view matters from a speculative rather than from a cooperative standpoint.

The manager should be able to work with growers and business men. He should be patient and determined, and he should have a strong sense of fairness

and justice. He must be of a type that will command respect.

He should be a good business man. A man who has not been able to make a success of his own business will not be likely to make a success of a co-operative association.

There are not enough experienced cooperative managers available, and very often a manager must be developed. It is better, as a rule, to take a man with the grower and cooperative viewpoint and train him in marketing rather than to take a man who was formerly a dealer or speculator and try to teach him the cooperative idea. It is usually impossible for the latter to acquire the true cooperative spirit, while the former can learn the marketing end of the business in a short time if he is a bright fellow. Furthermore, if the marketing is done through an agent, cooperative or otherwise, it is unnecessary for the manager to have a complete knowledge of marketing details.

As a rule, it is best to employ an outside man. Most local men have some enemies and are so well known that some members will not respect their leadership like that of an outsider. In some small local associations, however, the large overhead expense would make it impracticable to employ an outsider, and it is not uncommon in such cases to get a local man who has the confidence of the members.

#### Qualifications Necessary for a Good Manager

The manager of a central association must have a broad training. In addition to all the above requirements, he should have a good education; he should know how to organize and operate an office; he should be able to handle men successfully; he should be able to meet bankers and business men; and he should know how to interpret market reports and direct the sale of products. It is desirable that he be a good speaker, and that he be familiar with the methods of producing the crops marketed by the association.

The manager of a local need not have such broad training. He should be thoroughly familiar with growing methods and the preparation of the products for shipment. He should be able to handle the working forces. The local manager will be in closer contact with the growers than an exchange manager and he should be able to command their respect and confidence.

Before employing any manager, it is important for the directors to inquire rather closely into his past history.

Many associations, and especially exchanges, will need one or more assistants, department heads, or other employees. As a rule, the best plan in such cases is to have the manager make recommendations to the directors, who then approve or reject the recommendations.

No manager should be a member of the Board of Directors. If it is desired to employ a director in a permanent position, he should resign from the Board. Few men can cast an impartial vote in the affairs of the association when they hold a regular position.

### **RELATIONS BETWEEN MANAGER AND DIRECTORS**

For best results, a harmonious relation must exist between the directors and manager. Neither should assume the roll of dictator, and neither should depend entirely on the other. Together, they should develop the policies of the association, and the manager should then put into operation the principles he and the directors have agreed upon.

The directors must have confidence in their manager. If they do not feel they can have complete confidence in a man, they should not employ him. If they lose confidence in him, they should make a change as soon as possible. On the other hand, the directors

are under a serious responsibility, and they should always bestow their confidence with their eyes wide open.

### Relations with Members

The directors and manager should never lose sight of their responsibility to the members and should always remember that the association is completely owned and controlled by the growers. The members are entitled to know about the affairs of the association, and the leaders should not make secrets of the general affairs of the association. It is far better to keep the growers fairly well informed than to attempt to cover up difficulties and have them suddenly become known after the damage is done. Keeping the growers informed promotes their confidence and helps to gain their support. It is seldom that a body of growers will fail to make a fair and just decision on a question when the facts are put squarely before them.

### How to Promote Good Feeling

It is a good thing for local associations to call meetings occasionally. At these, the affairs of the association should be discussed, the growers should be kept informed on the general trend of affairs, and the cooperative idea should be encouraged. It is also well to have a meal together occasionally, for this helps greatly to bring the members together in thought and spirit.

The manager of an exchange cannot meet individual growers to any large extent. If there are not too many locals, he should try to attend the annual meeting of each. Otherwise, he should try to attend district meetings so that he can personally appear before the members at least once a year.

The directors of an exchange should assist the manager by attending as many meetings of the locals as possible. Their presence promotes the confidence of growers in the exchange. Furthermore, the directors



can usually gain much information that will be of value to them in conducting the affairs of the exchange.

An exchange, especially during its early years, should issue a printed publication or mimeographed letter to all of its members once a month or oftener. Through this, the growers can be kept informed, the principles of cooperation can be taught, and the propaganda of enemies of the association can be counteracted. Enough advertising can usually be secured to pay the cost of printing; and by putting in the contract or membership agreement a provision for subscription to the official organ, the second-class mailing privilege can be secured, which will allow the mailing at a very low cost. An addressing machine will be found quite helpful for addressing circular letters and periodicals.

### **METHODS OF ENFORCING THE CONTRACTS**

During the organization campaign, many growers will probably sign contracts without fully realizing they have turned over the sale of their products to the association. Some growers seem to think they can appoint the association sole marketing agent and still retain the same marketing rights they possessed as individuals.

Soon after the organization campaign, a meeting of each local should be called and the growers should be told frankly of their responsibilities. Try to arouse in them a sense of local pride and loyalty. The managers and directors should assume the same spirit in their daily routine. These steps make it more difficult for growers to break their contracts. Local pride and loyalty will be stronger factors in enforcing contracts than fear of the law.

There may be a grower here and there who will purposely violate his contract. Such matters must be handled firmly and promptly. A weak policy may

sooner or later wreck the association. Growers will be more likely to respect the association if it takes a firm business-like stand than if it adopts a weak vacillating policy.

After all persuasive means have failed, it may be necessary to eject the member from the association or bring suit for damages and for an injunction to require specific performance. The action to be taken will of course depend on the circumstances. Most associations have more or less trouble with contract enforcement until their contract has been upheld by court decisions.

### How to Forestall Broken Contracts

In a new association particularly, a lot of opposition may be expected from speculators. They will use every means, both fair and foul, to induce members to break contracts.

It is a good precaution, before the selling season opens, to send to each buyer and dealer in competition with the association, a list of the membership, a copy of the contract, and a letter (all by registered mail, with request for return receipt), telling them that the members whose names are included in the list are under contract in the form enclosed and that any attempt on their part to induce such members to break their contracts will be firmly dealt with.

There is a United States Supreme Court decision in which one party was compelled to pay damages for inducing another party to break a contract of which the first party had knowledge. Several state courts have rendered similar decisions, and there are now a number of state laws with sections especially covering such cases.

### HOW TO BORROW MONEY

Most associations are compelled at one time or another to borrow money. This may be necessary to

provide equipment and to meet operating expenses or to make advances to growers.

A capital stock organization will not always need to borrow money, since it usually raises considerable money from the sale of stock.

Non-stock organizations may need to borrow money at the start to provide equipment and to meet operating expenses until the returns begin to come in. Some non-profit associations borrow money on collateral notes furnished by the members. In borrowing money on membership notes, the notes are sometimes all deposited at one bank, but if the amount of money desired is greater than the loaning power of a single bank, the notes are commonly distributed between two or more banks. However, for purposes of promoting good will, the notes are sometimes used to borrow from two or more banks.

In any case, all of the notes should be used for any loan desired, so that all members will bear equal responsibility. It is not good business policy to deposit only part of the notes for a loan and thus permit some of the members to go without responsibility.

If possible, arrangements should be made at the banks for a definite amount of credit on the notes. It is usually not possible to borrow 100% on collateral notes. The amount should be agreed upon with the banks in advance, and if possible, arrangements should be made so that the association may borrow any sum needed or may increase or decrease the loan at any time, always within the limit agreed upon. Sometimes a trust agreement is made out and left at the bank with the membership notes.

In addition to borrowing money on the membership notes, an association can borrow money on its packing house or other equipment, if more is needed.

If an association has the right, under its contracts, to pass title to and pledge the products, it

can sometimes borrow money on the basis of the contracts. Money is also borrowed on the draft or bill of lading after the products are shipped. Warehouse receipts are used in borrowing on products stored in bonded warehouses.

After an association is well established, it can usually borrow money with little difficulty. It is usually best to do the borrowing from local banks, although for large loans, it is sometimes necessary to seek the aid of federal reserve banks. In recent years, the War Finance Corporation has assisted many cooperatives with loans.

In many associations, the directors assume personal responsibility for loans. This is a very unwise policy. The business is conducted for all the members and all should share in the responsibility. The directors perform a sufficient service when they manage the affairs of the association, and they should not be expected to supply all the security for loans.

### EQUIPMENT NEEDED FOR HANDLING PRODUCTS

There is a great variety of equipment for handling fruits and vegetables, and only the general principles can be outlined here.

For some products, very little equipment is necessary. For instance, watermelons may be hauled in wagons or trucks directly to the car door, where they are sorted into sizes by means of hanging scales or by the trained eye or "feel" of the loaders. Sometimes the growers themselves assort the melons into sizes and place the various grades in different wagons for loading into different cars. Some products which are packed on the farms can be inspected at the car door, and thus very little equipment will be necessary.

### Inspection Platforms

Some products, like strawberries, must be packed on the farms, but they must also be inspected rather carefully at the receiving point. The inspection will be more efficient if such products are first placed on an inspection platform. Here the inspector will have good light and his inspection will be more accurate and equitable for all growers. After inspection, the products are carried or trucked into the cars.

In a number of cases, railroads have built inspection platforms. They should be covered, so as to protect the products from sun and rain. The cover should extend over the driveway also, so as to protect the products while being unloaded from the wagons.

### Packing Houses Should Be Encouraged

While some perishable products must be packed on the farms and inspected at the receiving point, all products that can be hauled in temporary carriers to the receiving point without serious damage, should be graded and packed in community packing houses. If the cooperative idea is new, many growers will hesitate to approve of packing houses, feeling that they can pack as good as anyone. This may be true, but it is a fact that no two growers will have exactly the same standards, and under such conditions, the products will not be uniform in character. The packing can be done much cheaper and better in community packing houses than on the farms, a more uniform quality of products can thus be offered for sale, and the trade will usually pay more for association-packed products.

Location of Packing House—A packing house should be located on a railroad switch (at a boat landing in case of water transportation) if at all possible. It should be on ground owned by the association or leased for a long term. There should be plenty of room for wagons and trucks outside the

building, and there should be opportunity for extension of the plant.

Size and Shape of House—The packing house should be large enough for handling the prospective tonnage, and the shape should be such that the necessary interior equipment can be comfortably accommodated. It is well first to determine the kind of machinery needed, and then to fix the size and shape of the building according to needs. For instance, a house for packing apples in barrels and baskets should be at least 40 feet wide (and 50 or 60 feet is better) to accommodate the sizing machines. The length should be whatever is necessary to handle the desired tonnage. A house 50 to 60 feet wide and 80 to 90 feet long can be made to handle about 8 to 10 cars of apples a day, with two sizing machines and with the fruit being loaded into cars soon after packed.

Interior Arrangement—In some apple and potato sections, the basement is sometimes used for common storage. The grading and packing are almost always done on the main floor. For most products packed in packages, a second floor is provided for storing empty packages. Sometimes an adjoining building is used for housing packages and other supplies. When there is more than one floor, an elevator or power belt conveyor is quite commonly used between floors.

Light and Power—Natural light is the best kind for packing house work, and every house should have plenty of windows, so that as much natural light will be admitted as possible. In sections of the country where the snowfall is light, saw-tooth roofs with windows are often used in order to admit light from the top. In such cases, of course, there can be no second story in which to store packages. Natural light is far better than artificial light for determining color differences while grading fruits.

Electricity is the best source of artificial light and power for packing houses. If the city or town has electric light, this will be the most depend-

able source. In many packing houses, the growers have installed plants for generating their own power and light. Gasoline power is directly used in many houses and is quite satisfactory when no light is needed for packing at night.

Sizing Machines—For many products, like apples, peaches, oranges, potatoes, and so on, sizing machines are used. These vary greatly in type. Some separate the fruit into sizes by weight; some have rings or circular openings through which the fruit passes; others have longitudinal rollers with gradually widening spaces between adjoining rollers.

Before selecting such equipment, one should carefully investigate all the machines on the market for handling the kinds of products marketed by the association. Some machines bruise the fruit more than others. Some of the cheapest machines prove to be the most expensive in the long run. On the other hand, a high price is not a guarantee of superiority.

Where there are two or more sizing machines in a house fitted with electric power, it is better to have a separate motor for each than to have a shaft-and-pulley system. Small motors are quite reasonable in price, and the little difference in cost of an extra motor will soon be offset by the saving in electricity and wear and tear.

Conveyors and Trucks—In order to enable the association to save time and labor, many packing houses are equipped with roller conveyors. These have been so perfected that almost any arrangement desired for distributing products can be secured. In many houses, no lifting or trucking is done whatever.

In houses not equipped with conveyors, a very good way to handle fruit is to place it on platforms similar to sleds with about 10-inch runners. A load of fruit in boxes or crates from one grower is placed

on one of these platforms and a tag is placed in one of the top crates. When it is desired to move the load of fruit to the sizing machine, a lift truck is simply run under the platform and the whole load is quickly moved.

When Crates Should Be Supplied—When a community packing house is operated, it will be best for the association to own the crates in which the products are delivered from farm to packing house. By this method, a uniform lot of crates can be secured and usually the cost will be less than if the crates are bought by individual growers. The association can systematize the use of the crates so that a smaller total number will be needed than if each grower owns his own set of crates. Fewer disputes will arise as to the ownership of crates, which sometimes becomes a serious matter when the crates are owned by individual growers.

It should be kept in mind that the crates will be paid for by the growers no matter whether owned by the association or by individual growers. The cost probably will be less when the crates are purchased in quantities by the association.

The crates or boxes should be of uniform size; they should be so constructed that they will stack on each other; they should be of a size and shape that will fit in wagons or trucks and permit easy handling; and they should be strong and durable. Sharp edges should be beveled to prevent bruising of the fruit.

### Precooling Plants

The use of precooling plants is being extended quite rapidly. They are proving valuable for highly perishable products like peaches, strawberries, cantaloupes, and so on. By placing these products in a precooler immediately after being picked and packed, and thereby removing the natural heat quickly, they can be shipped much farther and will hold up longer than if placed immediately in refrigerator cars.



Precooling plants vary in type, but the principle in all of them is the same. In some cases, a whole car of products is run into a large plant. In other cases, a pipe is lowered into the car door and cold air is circulated through the car. In other cases, the products are placed in ordinary cold storage for 24 to 48 hours and are then loaded in refrigerator cars. Some plants are now being constructed to serve as precoolers in the summer and as cold storage plants in the winter.

### Other Equipment

There are many other kinds of special equipment, such as washers, dryers, bleachers for citrus products, canning outfits, evaporators, by-product plants, and others which cannot be described in detail here.

Any association planning to build or install extensive equipment of any kind should get all the literature possible from the U. S. Department of Agriculture and the various state agencies. It should send to the manufacturers of equipment for their catalogs. A representative should be sent to visit other cooperatives that have similar machinery installed. A careful investigation in advance will save much time and money, and better results will be obtained.

### LABELS, BRANDS, AND COPYRIGHTS

The best results in selling fruits and vegetables will be obtained through the use of labels, brands, and copyrights. These become known among customers, and they bring increased returns to the growers if they stand for products of merit.

Brands and labels give an association an opportunity to benefit from the cumulative effects of advertising. It is a well-known principle in business that the first sale is often an expensive one to make, but that later sales are made at relatively

small expense if the preceding purchase was satisfactory. Brands and labels identify the products and make later sales easier, whereas for unbranded products each sale is very largely a new sale.

It should be emphasized that good results are obtained from the use of brands and labels only when the products behind them give satisfaction to the buyers. Labels on poor products are an advertisement against an association instead of for it. Therefore, the use of brands and labels should be guarded very zealously by the association at all times.

Sometimes two brands are used by an association—one for the fancy grade, and another for products of good quality but not of such good appearance as the leading grade.

It is needless to say that all brands, labels, and copyrights should be owned by the association or exchange, should be registered in its name, and should be used only on products marketed through it.

#### How to Secure a Good Design

A brand or label, to be most effective, should be simple and expressive. The name should be simple, easily pronounced, easily remembered, suggestive to the imagination, and if possible indicative of the section or locality. The design should be attractive and dignified and should be susceptible to picturization in various ways.

Quite commonly, some member or officer will be able to suggest a good name and design for a label. An artist can usually be secured to draw a sketch at a reasonable price.

An application for a trade-mark should be made to the United States Patent Office at the earliest date possible, in order that some other person or agency will not appropriate the brand. The registration of trade-marks is a specialized business and should be handled through a patent attorney. Before investing

in a label, it is well to ascertain whether or not a similar label is being used by any other person or agency, and if there is any danger of your label being considered an infringement.

Before you can file an application, the label will need to be actually used in interstate commerce. One package of products carried over the state line by auto, boat, express or freight will be sufficient. Make out an invoice showing the transfer. The label must be in use for one year before the trade-mark will be registered.

In addition to a brand or label, some associations also adopt slogans. These should be copyrighted.

### **RELATIONS BETWEEN LOCAL AND CENTRAL MANAGERS**

The local and central managers should keep each other fully informed during the shipping season. The mails may be used for many communications; but for perishables, telephone and telegraph communication is commonly necessary. The telephone is usually best because it permits an exchange of information. The local manager should advise the central manager as far as possible in advance what he is going to have for shipment. When the products are loaded, he should advise the central manager, who will then, or later, give shipping directions. The central manager should also keep the local managers informed of market conditions.

### **ACCOUNTING METHODS**

There are many details to keep record of in cooperative work and it is necessary that systematic methods be adopted for handling these details.

#### **Growers' Receipts**

In the case of products packed on the farms, each grower, on delivering his products and after inspec-

tion, should receive a grower's receipt showing the number of packages of each grade and kind of product delivered. In the case of watermelons and other products not handled in packages, the receipt should show the number of melons of each weight or class, the total number of pounds or other unit of measure or weight, and the grade.

When the products are graded and packed in packing houses, it is quite common to give the grower a receipt showing the number of crates or bushels of products delivered. The receipt also should show the number of crates brought in and taken out in case the crates belong to the association. After the products are packed, a grading receipt or card is filled out showing the number of packages of each grade resulting from the products delivered by the grower. These grading receipts can be delivered to the grower in person or mailed to him.

At the start the growers may insist on receipts, but as their confidence develops, they will pay less attention to them. The association, however, should continue to keep a careful record, both for purposes of efficient service and in order to prevent disputes.

When the returns are pro-rated by the local association, the growers' receipts should be in duplicate. When the returns are pro-rated from an exchange, they should be made in triplicate. In the latter case, the local manager should keep one copy, he should give a second copy to the grower, and the third copy should be sent to the exchange headquarters in connection with the loading and pooling reports. It is better to use receipts with carbon backs than to use carbon paper. For inspection service, the receipts should be made into pads which fit into the pocket. For packing house work, it is probably best to use small duplicating machines.

### Manifests and Loading Reports

The local manager should make out a manifest and loading report in duplicate for each car of products.

He should keep one copy for his own use and he should forward the other to the exchange headquarters. The information on this report is necessary for filling out invoices, making returns, and for arranging the pools. The loading information will often be found valuable for handling claims.

Some associations tack on the inside of the car a list of the contents and a diagram showing where the various grades are placed, if the car is a mixed one. This information makes it more convenient for purchasers and tends to promote future trade.

### Pooling Sheets

The local manager should also fill out pooling sheets showing the quantities and grades of products in each pool from the various growers. If the returns are to be made from an exchange, one copy should be sent to the exchange.

### What Accounts to Keep

It is important that an adequate bookkeeping system be adopted, for otherwise it will be impossible to determine at any time whether the association is headed toward success or failure. Farmers have not, as a rule, been keeping good accounts of their affairs and they are likely to underestimate the importance of a good bookkeeping system.

A double-entry bookkeeping system will be found best for cooperative work. There should be an account with each shipper or grower showing the kinds of produce and the quantities and grades of each delivered by the grower. There should be an account with each commodity marketed, which should show all receipts and expenditures in connection with the handling of the commodity. There should also be an account with each kind of supply purchased so that the association may determine whether or not a loss or gain is resulting from the handling of any kind of supply.

A commission account should also be kept to which should be credited all sums deducted as handling charges. If a revolving plan of financing is adopted, there should also be kept a separate account for this fund.

Every organization should make returns to growers as promptly as possible after their receipt from purchasers. In the case of pools extending over a period of time, some associations make advances to the growers on a percentage basis from time to time as parts of the pool are sold, or have advanced money to needy growers on a credit basis.

In exchanges, the returns are ordinarily made to the local associations, which, in turn, pro-rates them to the growers. However, in the case of small local associations whose shipping season is short, the returns are sometimes pro-rated directly from the central office, which is usually well equipped for quick work. This saves the small locals the expense of a clerk and makes possible a less elaborate book-keeping system. In such cases, the local manager must mail the central office a manifest of the shipments in each car, and he must also indicate the various pools.

### DEVELOPING A SALES SERVICE

Even with the best methods of standardization and local management, a cooperative association may fail through lack of an efficient sales service. This matter should early receive the most serious attention.

In developing a sales service, there are three alternatives open for fruit and vegetable cooperatives. One consists in establishing an individual sales service; the second consists in working through private agencies; and the third consists in selling through the national grower-owned and grower-controlled organization, called the Federated Fruit and Vegetable Growers, Inc.

### Individual Sales Service

Organizations with a large tonnage well distributed over the season have, in several cases, developed an effective sales service of their own. For this purpose, it is necessary to have expert salesmen. Traffic men must attend to the routing. Salaried representatives should be kept in as many markets as the amount of business will justify. Brokers can be used in the smaller markets.

The representatives and brokers keep the home office informed regularly regarding market conditions. They solicit trade. They receive quotations from the home office and forward them to dealers. They look after questions that arise. They attend to claims and collections. And they look after the growers' interests generally. Quite commonly, such associations conduct an advertising service in addition, and operate a claims department.

A thoroughly competent sales service for fruits and vegetables must be nation wide in its scope, for rapid transportation and efficient refrigeration have brought all sections into competition with each other.

It will be seen, therefore, that only associations controlling a large tonnage fairly well distributed over the season can develop and maintain an effective sales service at a reasonable overhead expense.

### Selling Through Private Agencies

A great many of the smaller associations and exchanges have been selling their products through private agencies. Sometimes it is an individual, sometimes a commission house, and sometimes a corporation which makes a business of marketing for cooperatives. Some of these agencies have in the past furnished the best outlet obtainable for many cooperatives, but there have always been serious defects in this kind of a sales service.

In the first place, such organizations work on a brokerage basis, which is only a modified form of the commission system. In the second place, many of such agencies do not control a large enough tonnage to make possible a high class sales service. Again, such agencies are quite often more concerned about immediate dividends than in adopting policies looking to the future welfare of fruit and vegetable growers or the general public. The chief incentive for such organizations to render a satisfactory service is that they may be awarded the contract another season.

The representatives of some of these agencies do not understand cooperation, are not in sympathy with it, and do not promote it. On the contrary, some of them actually discourage the cooperative idea.

As a rule, growers are always doubtful about such agencies, and the agencies must, therefore, spend much time and money in maintaining an existence. For instance, the writer knows of one case in which five high salaried men solicited the business of a single cooperative on one occasion. It is needless to say that the growers in the long run must pay these bills.

Some of the private sales agencies own orchards and gardens; they buy, sell, and deal in products on a speculative basis; and they own and operate produce houses in some of the markets and receive products on consignment. Of course, such agencies always claim that they give the products of cooperatives equal consideration with their own, but there is always a doubt in the minds of growers as to whether, under unfavorable market conditions, the company will give first consideration to the products of cooperatives or to those in which it has money invested.

While some of these private agencies apparently operate on a fair basis and have in the past furnished a better outlet for the products than could have been secured in any other way, the best of them have accomplished practically nothing in meeting and solving the great fundamental problems of the fruit and vege-



table industry or in placing the sale and distribution of these products on a more orderly and systematic basis.

### THE FEDERATED FRUIT AND VEGETABLE GROWERS, INC.

In view of the unsatisfactory conditions surrounding the sales and distribution of perishables, the American Farm Bureau Federation appointed a National Fruit Committee to investigate and report on the problems of the fruit and vegetable industry. After about a year of work, the committee recommended the formation of a national grower-owned and grower-controlled association which would concern itself with all the national problems of the fruit and vegetable industry and which would also furnish sales and distribution service for cooperatives. As a result, the Federated Fruit and Vegetable Growers, Inc., was formed.

One of the first official acts of this new organization was to contract to take over the affairs and business of a private sales organization which has been marketing products since 1911 for cooperative associations and other shippers. The personnel of that organization was also taken into the "Federated." This move gave the "Federated" control of a fair size tonnage to begin with. It gave the organization advantage of a trained and experienced sales force. And it also eliminated any competition which the former organization might have offered had the transfer not taken place.

The Federation sends experienced salesmen and traffic experts to take charge of the sales and distribution of products of cooperatives during the shipping season. This is a great advantage to organizations having a short shipping season. In the case of strawberries, for instance, one salesman can serve two or three sections in one season, and later he can handle other products. This method gives small

cooperatives the advantage of a high class sales service at the least possible expense.

The salesman keep in touch with salaried representatives that are maintained in all larger markets, and with bonded brokers in the smaller markets. These representatives are handling products from different sections the year 'round. They can thus become closely acquainted with the trade and can learn the best methods of trading with various dealers, and they can retain constant trade connections--a factor of great importance from a business standpoint.

Being a non-profit organization, the Federation is operated at cost. If the charges are greater than necessary to meet expenses, a refund is made. A small fee per car is placed in a revolving fund to pay for property and to establish a reserve fund. The amounts contributed to this fund will be returned eventually to the contributors on a revolving plan.

The Federated Fruit and Vegetable Growers, Inc., with good management, should be a great help to fruit and vegetable cooperatives, especially the smaller ones that are not able to develop an efficient sales service of their own. Being grower-owned and grower-controlled, it is an organization in which growers can have complete confidence. There is no occasion for it to adopt the sharp practices which have characterized some of the private agencies. It should not be put to great expense to retain its membership and tonnage. It has the support of the national, state, and county farm bureaus, university extension departments, state marketing officials, horticultural societies, county agents, and other agencies.

This organization should be able to render a highly effective sales service, and at the same time it can devote its attention to the fundamental problems of the industry so that, looking to the future, it can gradually place the sale and distribution of perishables on a more systematic and orderly basis than has heretofore existed.

### MARKET REPORTS

Every cooperative should write to the nearest office of the U. S. Bureau of Agricultural Economics and ask that its name be placed on the mailing list to receive the daily and weekly market reports. These show prices and receipts at the various markets and give other important information. They help the manager to keep posted, and he can conduct the affairs of the association much more satisfactorily even though the sales service be rendered by an exchange or other agency.

### TRADE PAPERS

It is well for each association to subscribe for one or more trade papers. Some of the more important are the Packer, Fruit Trade Journal, and Produce News. These contain current news of the day and help greatly to keep a manager posted on conditions in not only the markets, but in other producing sections as well.

### CREDIT RATING

Associations which do their own sales work should subscribe to either the Produce Reporter or the Fruit Produce Rating Agency. The books which these organizations loan to subscribers contain the names and addresses of produce firms, dealers, and jobbers of fruits and vegetables, and also give the credit rating of each.

### TRADE TERMS AND VOCABULARY

Practically every specialized business has a vocabulary of trade terms and definitions which are peculiar to it. In fruit and vegetable marketing these terms have been increasing in number for many years and different meanings have been attached to the different terms by various dealers.

Within recent years much has been done by the leading trade organizations in standardizing rules and definitions of trade terms. Definitions have been prepared and these are distributed in booklet form to members of these associations and to others requesting them. These standard rules and definitions are rapidly becoming the basis of all trading in fruits and vegetables and it will be well for the student to secure a copy and study them. It is suggested that the student write one of the following organizations:

American Fruit and Vegetable Shippers Association, Chicago

International Apple Shippers Association, Rochester, N. Y.

Western Fruit Jobbers Association

National League of Commission Merchants

### THE PURCHASE OF SUPPLIES

Most of the growers who have formed cooperative fruit and vegetable marketing associations also purchase supplies cooperatively. Sometimes the supplies are handled through separate associations. Especially is this true when considerable investments are necessary, as for instance, when the growers operate a box or shook factory for making package material. Ordinary supplies, however, like spray materials, fertilizers, and packages, are quite commonly handled by the marketing association, which should be incorporated with broad enough powers to permit such activities. A number of Michigan cooperatives handle not only horticultural supplies, but feeds, seeds, and other general farm supplies as well.

In handling supplies, it is quite common to sell to non-members as well as to members. In many cases, no refunds are made of profits from handling supplies, and it is not unusual to charge a margin appreciably

higher than necessary to perform this service. This means that the profits from handling supplies help to lower the cost of the marketing service.

The purchase of supplies complicates the business somewhat, but, handled properly, it is a good feature. The margins of profit help to lower the general overhead expense. Such associations can keep their manager on the job the year 'round, and in this way they can employ a better manager than would otherwise be possible. Furthermore, the association can be kept in constant activity, which greatly adds to its prestige among the growers and the community.

Some supplies can be purchased at appreciably lower prices by the associations. Some others, like spray materials and packages, are sold at very close margins by dealers, and with these an association cannot make great savings in money for growers. However, they can help materially in securing earlier delivery, in obtaining lower freight charges by pooling orders in car-lots, in keeping the supplies on hand, and in securing supplies of better quality.

The purchase of supplies, if they are carried regularly in stock, requires considerable financing. However, many supplies can be purchased on liberal credit, and trade acceptances often can be used. It is advisable not to carry large quantities in stock when there is any danger of sudden price decreases. Some associations were practically wrenched by sudden price declines following the World War.

In order to guard against losses of this kind, many associations buy the larger portion of their supplies on definite orders placed in advance by growers, accompanied by a liberal deposit. This insures that the growers will come after the supplies promptly when notified, no matter whether the prices have declined or not. It is an unfortunate fact that some growers will not hesitate to disregard their orders and buy elsewhere if they can do so to better advantage.

Such methods of handling supplies do not, of course, provide for carrying supplies in stock. An extra quantity can be purchased to take care of straggling patrons. In this case, however, a somewhat higher margin should be charged for the service, for few growers will place their orders in advance if it is not to their advantage to do so.

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### FOREIGN TRADE IN FRUITS AND VEGETABLES

Why is it that the Panama Canal has made it easier for Pacific Coast orchardists to compete with Australia and Canada on the British markets?

Just how can America compete with other nations in the foreign trade?

Why is it that some vegetables are imported from as far away as Egypt?

These, and dozens of other fascinating and practical questions are most interestingly answered in the lesson that follows.

## GLOSSARY OF MARKETING TERMS USED IN THIS LESSON

inspection platform. A structure usually built along a railroad siding, on which products may be inspected before shipment.

mimeographed letter. One of a number of printed sheets on which the printing resembles typewriter type. Made on a machine known as a mimeograph, which prints a large quantity of letters exactly alike, from a stencil made on a typewriter.

Often used to refer to duplicate letters of any sort. Sometimes these letters are duplicated by using typewriter type on a printing press, ordinarily printing through a ribbon. At other times, they are letters printed on a multigraph, which is a rotary machine printing from type through a ribbon.

saw-tooth roof. The cover of a building made with successive pitches, each pitch covering only 15 or 20 feet of the width of the building. So named because of its resemblance to saw teeth.

sharp practice. An action on the part of either a buyer or seller, in which one takes unfair advantage of the other to benefit himself.

trust agreement. As used in this lesson, a document delegating powers to a third party (usually a bank or one of its officers) applying to notes deposited as collateral.

War Finance Corporation. An organization formed by an act of Congress in April, 1918, for the purpose of giving help to enterprises necessary to the prosecution of the World War, that were unable to secure funds from regular banking institutions.

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**Note:** This is part of the Marketing Dictionary supplied with this course.

## QUESTIONS FOR LESSON 14

As soon as you have mastered this lesson, answer these questions and submit your answers to The American Institute of Agriculture, Chicago, Ill., for grading or correction.

Do not fail to write your name, address, and matriculation number plainly on each set of answers you send. Be sure to give the number and letter of the lesson, and the number of each question answered. Write each question in full before writing the answer. Be brief and explicit. Refine your answer to the length indicated, if possible. Use a typewriter if you have one.

Answer all questions. If any are omitted, the omission will count against you.

- I. How may a director of a cooperative shipping association inform himself as to his duties?
- II. Why is it that a local man very often does not succeed as manager so well as a stranger?
- III. How would you promote good feeling among the members of an association of which you are manager?
- IV. What is one good way to prevent competitors from encouraging members to break their contracts with a cooperative shipping association?
- V. Suppose that you are manager of an association that does not have sufficient working capital; what plan would you be likely to use for borrowing the necessary funds?
- VI. Why is it important in most cases that a local association operate a packing house?
- VII. What is usually the best way to secure a good design for a trade-mark or label?
- VIII. Name the three ways in which a local shipping association may have the benefit of a sales service.
- IX. Give a list of sales representatives required for a nation-wide selling service.
- X. Why is it that the Federated Fruit and Vegetable Growers, Inc., is likely to sell fruits and vegetables for cooperative shipping associations at a lower selling cost than a private selling agency?







# Foreign Trade in Fruits and Vegetables

By CLARENCE W. MOOMAW



MARKETING FRUITS AND VEGETABLES  
LESSON 13

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Issued for Members

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CHICAGO



## THE MAN WHO CONDUCTS THIS LESSON



CLARENCE W. MOOMAW

Clarence W. Moomaw has been prominently identified with the Virginia fruit and canning industry; likewise, he was successful in accomplishing distribution of Virginia apples direct from the orchards to many domestic and foreign markets.

He initiated and organized the government's monthly reports of cold storage holdings of apples, which later was extended to include all staple perishable food commodities.

Intensely interested in cooperative organization, Mr. Moomaw served the Bureau of Markets in extending this marketing plan, with special reference and application to our foreign trade outlets. He selected and placed at London, the first American agricultural trade commissioner ever detailed for such work.

The policies which Mr. Moomaw instituted while employed in the Department for the extension of our foreign trade in fruits and vegetables, are recognized as pioneer work of the highest order.

### HOW TO STUDY THIS LESSON

The subject matter of this lesson represents original material assembled at great cost, and is designed to familiarize the student with export trade practices.

The World War has modified conditions of long-standing affecting exports and imports of perishable products. The author has pointed out the great opportunity for extending our trade relationships with foreign countries and has outlined in detail the procedure for establishing contact with purchasing agents in the several countries.

In studying this lesson, try to visualize the distribution and the demands of the several countries for our fruit and vegetable products. Remembering that while it is scarcely possible for the individual producer to take advantage of these markets, nevertheless it is within the realm of possibilities that cooperative marketing agencies, now so popular in this country, will eventually find a way of supplying these markets. This plan would enable the producers to unload their surplus fruit and vegetable crops at prices commensurate with costs of production.

Be sure to master the summarized suggestions contained in this lesson, outlining the details with which one must be familiar in order to intelligently make consignments to foreign countries.

## STUDY OUTLINE

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## **FOREIGN TRADE IN FRUITS AND VEGETABLES**

**BY CLARENCE W. MOOMAW**

There is a certain romance about sea borne trade which lends great attraction to any foreign trade project. The beckoning call of the sea and the far places of the world have ever promised adventure and riches. Many young men from all parts of the country have answered the call, but their dreams of adventure and riches have not always come true. When they come to active participation in foreign trade, they often find that there is more venture than adventure, and that there are many grievous losses as well as riches. As for the romance, the work soon becomes just as much of a grind as in any other business.

If the foreign trader starts with the inspiring vision of service - service to basic American industries, service to foreign peoples who need our commodities - and if he keeps this splendid vision alive through all the trials and tribulations encountered, he may find substantial romance, if not riches, in his chosen field.

### **Foreign Trade Builds International Relationships**

Foreign commerce more than any other factor has had to do with the spread of civilization and the up-building, or the tearing down, of international relationships. The foreign trader is both a missionary and a diplomat, whether good or bad, and it should be the object of the student ever to remember this, and endeavor to serve well his civilization and his country in his capacity.

The time was when piracy, the antithesis of missionarying and diplomacy, was a great business. Pirates are still to be found in the export field, but their operations become more and more difficult, because piratical business methods in the long run serve only to destroy the pirate. In foreign trade,



as in all legitimate lines, honesty proves to be the best policy.

The object of this lesson is to give as far as possible the facts and figures of America's foreign trade in fruits and vegetables. In this lesson, foreign trade refers only to overseas countries, because the trade with Canada and Mexico practically has always been treated as though domestic, being handled in very much the same manner as the markets of the United States. Canada is a strong competitor of the United States abroad in apples, and this will appear throughout the lesson whenever substantially encountered.

### Fruits, Our Primary Export

The lesson has to do primarily with fruits, because the greatest overseas markets, those across the Atlantic, do not take our vegetables. They produce bountiful supplies or can secure supplies from nearby countries at such low prices that America cannot compete. We actually import considerable quantities of vegetables, such as onions from Spain, Egypt, and Bermuda, and various kinds from the West Indies. However, there is a substantial trade in Irish potatoes and onions with Latin America, and this is treated in its proper place, with references here and there to similar trade in other directions.

For vegetables generally, it may be stated that as in the United States, so in foreign countries they pass through the same channels as do fruits, and are handled under the same methods. Therefore, for practical purposes, the suggestions given as to methods of procedure in exporting fruit may be regarded as applying also to vegetables.

### IMPORTANCE OF FOREIGN MARKETS

In terms of percentages of production, the export outlet of past years may look rather unimportant for all kinds of fruits and vegetables as shown in Table I. However, although the quantity is small,

exports are important because without them, we would have a much larger surplus.

The apple is the king of export fruits, the quantity in normal times before the World War having represented approximately on annual average of 10% of the total commercial production. Table I gives the commercial production and total exports of the principal tree fruits and vegetables of the United States during the calendar year 1920, exclusive of peaches, plums, lemons and grapefruit, for which there are no separate classifications in the Customs returns.

TABLE I. U. S. PRODUCTION AND EXPORTS, 1920

Kind	Commercial Production	Exports	Per Cent Exported
Apples	: 33,905,000 barrels*	: 1,797,711	: 5.3
Pears	: 16,805,000 bushels**	: 880,844	: 5.24
Oranges	: 29,700,000 boxes	: 1,517,994	: 5.11
Potatoes	: 403,296,000 bushels	: 4,153,565	: 1.02
Onions	: 23,435,000 bushels	: 845,778	: 4.03

\* Includes boxes, counted 3 boxes to the barrel.

\*\* The reports of pears are listed in the U. S. Customs returns as \$2,202,121.00, estimated to represent \$2.50 per bushel.

Please bear in mind that the exports given in Table I include Canada and Mexico, our overland foreign markets, which are not being treated under this subject for reasons stated. Canada takes the great bulk of our pear and orange exports and has ranked second in potatoes and apples, and third in onions. Mexico ranks second in onions and third in potatoes. Excluding from the table the exports to Canada and Mexico, it is found that in 1920, the over-seas markets took the following percentages of our total commercial production:

	Per Cent
Apples	4.35
Pears	2.99
Oranges	0.33-1/3
Potatoes	0.75
Onions	2.6

This is not a very encouraging showing for overseas countries. However, this business was transacted when American prices and ocean rates were still relatively high, and foreign exchanges at about the lowest on record.

For all but apples, the total exports of 1920 show relatively encouraging increases as compared with 1913. Before the World War, America exported apples heavily to the German market, and Canada took about a third more than now. It is apparent that the apple trade lost ground substantially in 1920.

It is vastly important at the present stage to develop the foreign outlet. The production possibilities are greatly increasing and apparently in many lines the economic surplus of the next few years may prove to be greater than in the past. For instance, one of the problems of the apple industry is the 100% increase in production in the Pacific Northwest during the past 10 years, and the end is not yet in sight.

The districts of the United States to which export markets are most important are:

Pacific Coast states	West Virginia
Middle and upper Mississippi Valley	Virginia
New England	North Carolina
New York	South Carolina
Pennsylvania	Georgia
Maryland	Florida

It may appear that the foreign markets are not of great importance to some of the fruit states, because some fruits have entered little into the export field. This is true of Florida and the states which produce primarily peaches, such as South Carolina and Georgia. However, there are believed to be latent possibilities abroad for these commodities.

Some of the apple, peach, and pear producing states of the middle and upper Mississippi Valley rarely do any exporting because they are well situ-

ated for supplying the great markets of the Middle West. However, they do not always do so at a profit and some years face a considerable surplus, and for this reason should be interested in the foreign outlet either directly or indirectly.

### THE FOREIGN MARKETS

The foreign markets for American fruit are the United Kingdom and Ireland, Continental Europe, Latin America, the Far East, and Australasia, with a few miscellaneous markets. The United Kingdom and Continental Europe are, of course, the most important, Latin America being third, Australasia fourth, and the Far East sixth in present importance. The demands and conditions of trading in the several regions being somewhat different, each is treated separately more or less, with greatest stress upon the Trans-Atlantic markets which are of the greatest importance.

#### PART I

### THE UNITED KINGDOM AND IRELAND

The United Kingdom and Ireland constitute by far our greatest overseas market. They take annually a very large percentage of our total fruit exports. Little mention will be made of Irish markets, because these have been supplied almost entirely by Liverpool and Glasgow.

The population of the Islands, 45 odd millions, is engaged largely in manufacture, ship building, and foreign trade. Before the World War, the Islands were the bankers of the world, with British money heavily invested in all kinds of projects in foreign lands, resulting in an enormous annual income. Agriculture and horticulture were secondary industries, the agrarian policy of the country being particularly notorious for its slack of encouragement and support of these basic industries. Nor-

mally, the Islands import about four-fifths of their food supply, a rather dangerous situation in the World War.

### Why Agriculture and Horticulture Was Stimulated

The impossibility of securing the normal food supply from overseas during the World War greatly stimulated interest in domestic agriculture and horticulture, and so the policy was set forward many years. Prior to the war, the orchards were not so well tended for the most part. They were poorly cultivated, poorly pruned, and poorly sprayed, as a rule. If they had been American orchards, they would have been regarded as of little commercial value, and their products because of poor quality, offered little competition except to the poorest kinds of barreled stock.

Owing to the import apple embargo of February, 1917, which lasted nearly a year, and to the very high ocean freight rates which preceded as well as followed the embargo for two years, the British growers enjoyed a period of very high prices with a very much larger consuming public owing to high wages in the civil and war industries. In consequence, they paid more attention to scientific culture, and, of course the quality of the fruit has improved. Just how long the interest and care stimulated under World War conditions will last, remains to be seen, but certainly there will remain considerable permanent improvement. However, the war did not stimulate better packing and distributing methods.

The British Isles are admirably situated for foreign trade purposes, and being the center of the shipping world, with innumerable lines to all parts of the globe, and with excellent ports on all sides within easy access of every city and town of the Islands, they offer possibly the most ideal condition of any country in the world for handling import trade in fruits and vegetables.

### BRITISH PRODUCTION

The British Isles produce considerable quantities of apples, pears, and plums, but the production of peaches and grapes is limited largely to hot houses and the sheltered walls of gardens. The fruit industry is confined largely to the south of England, and, of course, affects the southern markets mostly, especially since so little effort is made to distribute. British strawberries are celebrated for beauty and flavor and are grown in great profusion.

The vegetable gardens are extensive, and the variety and quality of the production is excellent. There is also an extensive hot house industry for the winter markets.

### SOURCES OF FOREIGN SUPPLY AND EXTENT OF IMPORTATIONS

Practically the entire world supplies the British Isles with fruit, but their foreign vegetables and small fruits come almost entirely from Continental Europe. There are no duties to add to the cost of these products.

The total value of fresh fruits imported by the United Kingdom in 1920 was 31,102,642 pounds sterling (\$151,361,007 at par of exchange) of which about one-eighth came from the United States. The sources of origin and the season of the principal fruits which appear in the British markets are given in Table II.

Imports of Fresh Apples - in 1920 were 4,620,329 cwt. (of 112 lbs.) of which nearly half came from the United States, the balance coming (in order of importance) from Canada, France, Australia, Netherlands, Belgium, Portugal, Germany, and other countries. The total value of the imports was 9,502,177 pounds sterling (\$46,242,344 at par). Apples are in the markets the year round, Australia supplying the late spring and summer demands.

Imports of Fresh Pears - in 1920 were 663,541 cwts., valued at 2,022,946 pounds sterling (\$9,844,-666. at par) of which about one-fifth came from the United States. The balance came (in order of importance) from France, Belgium, Netherlands, British possessions, and small quantities from other countries.

TABLE II. PRINCIPAL FRUITS SOLD IN THE BRITISH MARKETS, 1920

Kind	: Source of Origin	: Months of Appearance on the Market
Apples	:America and Canada :Australia :England	:September to April :April to July :July to December
Apricots	:France :South Africa :Spain	:June to July :December to January :June to July
Ananas	:Canary Islands :Jamaica	:January to December :January to December
Berries	:England :France	:June to July :May to June
Boseberries	:England and France	:May to July
Greenings	:England :France :Spain	:July to August :August to September :June to August
Guadallias	:	:April to September
Grapes	:Almeria :Australia :Channel Islands :England (hothouse) :Lisbon :South Africa	:September to February :April to May :August to December :April to March :August to October :March to May
Grapefruit	:America :Bahamas : :Jamaica : :South Africa	:November to May :November to March, June : and July :November to March, June : to September :August to September

Imports of Grapes - in 1920 were 593,108 cwts., valued at 2,080,467 pounds sterling (\$10,124,591. at par) of which none came from the United States. In the order of importance, the countries supplying the grapes were Spain, Portugal, Netherlands, with small quantities from other countries and British possessions.

Imports of Plums - in 1920 were 313,611 cwts., valued at 1,192,386 pounds sterling (\$5,802,746. at par) of which only 628 cwts., came from the United States. The other countries supplying this trade were France, Belgium, and Netherlands, with small quantities from other countries. More than three-fourths( were supplied by France.

TABLE II con't

## PRINCIPAL FRUITS SOLD IN THE BRITISH MARKETS, 1920

Lemons	:Italy and Spain	:January to December
Loquats	:	:April to May
Melons	:England & Guernsey	:May to October
	:France (cantaloupe)	:June to September
	:Valencia	:July to October
Oranges	:America	:December to September
	:California	:December to April
	:Denias	:November to May
	:Gandias	:November to May
	:Jaffa	:March to May
	:Jamaica	:October to April
	:Murcias	:November to June
	:South Africa	:May to December
Peaches	:Valencia	:November to April
	:England (hothouse)	:May to October
	:France	:July to August
Pears	:South Africa	:December to March
	:America and Canada	:September to March
	:Australia	:April to June
	:England	:August to November
	:France	:July to September
Plums	:South Africa	:January to May
	:America	:August to September
	:England	:July to September
	:France	:July to August
	:South Africa	:December to March
Raspberries :	:Spain	:June to August
Strawberries:		:June to July
Tangerines :		:November to April

Imports of Oranges - in 1920 were 4,401,764 cwts., valued at 8,017,095 pounds sterling (\$39,015,-192. at par), of which, during that year, only 7,990 cwts. came from the United States, somewhat under the average annual shipments.

Imports of Lemons - in 1920 were 500,461 cwts., valued at 708,654 pounds sterling (\$3,448,664. at



par) of which none came from the United States. The countries supplying the lemons were Italy and Spain, with small quantities from other countries.

Imports of Grapefruit - in 1920 were 13,734 cwts., valued at 31,325 pounds sterling (\$152,443. at par) of which 8,013 cwts., came from the United States, and practically all the balance from British possessions. This trade is more or less a recent development.

Imports of Bananas - in 1920 were larger than any other single fruit, the quantity being 8,057,625 bunches valued at 6,468,719 pounds sterling (\$31,-480,021. at par), coming principally from Colombia, Canary Islands and British West Indies. The banana trade is a development largely of the past twenty years and has resulted from intensive marketing methods.

Imports of Miscellaneous Fruits in Which America Did Not Participate - were peaches and apricots, 21,524 cwt., largely from France and Cape of Good Hope; cherries, 55,801 cwts., from France, Netherlands, and Belgium; currants, 88,758 cwts., from the same countries; gooseberries, 51,884 cwts., from Netherlands and Belgium; and strawberries, 54,842 cwts., from Netherlands and France.

The Imports of Vegetables - by the United Kingdom in 1920 were confined largely to potatoes, onions, and tomatoes, the total amount being 11,-375,488 cwts., valued at 13,038,034 pounds sterling (\$63,450,025. at par) of which the United States supplied no part whatever. This is very significant, because the British Isles are the largest of all foreign vegetable importing countries, and with the exception of Cuba is the most accessible to the United States.

#### AMERICA'S INTEREST IN THE BRITISH TRADE

It will be noted from Table II that heretofore America's interest in the British trade has been

confined almost entirely to apples, pears, oranges, and grapefruit, with extremely small shipments of the last two. The apple trade is indeed very old, official records of annual shipments going as far back as 1851, in which year 20 odd thousand barrels were sent over, until now the annual exports amount to a very great majority of the total American exports.

The trade in pears is fairly old; in oranges, of far more recent origin; and grapefruit very recent. Yet the British Isles constitute our chief overseas market for these three products. Table III shows the amounts of fruits exported to the Isles in 1920 as compared with the year 1913:

TABLE III. UNITED STATES EXPORTS TO BRITISH ISLES FOR YEARS 1913 AND 1920

Kind	Quantity or Value	
	1920	1913
Apples	: 1,249,114 bbls.*	: 1,318,396 bbls.
Pears	: \$761,965	: \$371,135
Oranges	: 9,707 boxes	: 14,831 boxes

\* Including boxes, counted as three boxes to a barrel

The trade was very much disturbed during the World War on account of shipping conditions. Since the war, exclusive of the season 1922-23, the exchange situation and high prices in the United States, during most of the period, greatly handicapped the trade, keeping it far below normal. However, with the more normal conditions now current, the export movement of apples and pears for the present season promises to be fairly normal.

In addition to apples, pears, oranges and grapefruit, there has been a small spasmodic trade in plums (Italian prunes), with occasional experimental shipments of peaches, grapes, and sweet potatoes, for all of which there are thought to be considerable potential possibilities.

Our trade in apples with the British Isles is very well developed but is believed to be susceptible to considerable expansion if intensive American methods are diligently applied. For the most part, the methods employed in the United Kingdom have changed little in the last half century, although the facilities have been greatly expanded.

### Demand for American Varieties

Nowhere is real quality more highly appreciated than in the British markets. They pay a handsome premium for what they want. This does not mean that the lower grades or the poorer varieties are neglected. Fruits, particularly apples and pears, are used in almost as many ways as in America, and the pie, more or less an American institution, has its counterpart in the British tart. Thus, in the deciduous fruit line, there is a very large demand for the cheaper varieties and grades, which they call "cookers."

Apples - Practically all commercial varieties of apples are sent to the British markets, in spite of the fact that some are unpopular. The principal varieties are:

<u>Source</u>	<u>Variety</u>
Virginia.....	Albemarle Pippins
New York and Pacific Coast.....	Newtons
New York and New England.....	Russets Baldwins Kings Greenings Ben Davis
Pacific Northwest.....	Spitzenburgs Delicious Ortleys Jonathans Winesaps Rome Beauties
Virginia, W. Virginia, Maryland, and Pennsylvania.....	Ben Davis Gano York Imperials
California and New York.....	Gravensteins

The markets are not very satisfactory usually for Stayman Winesaps, Black Twig, Grimes Golden, Arkansas Black and Wagner, and usually the Rome Beauty is not wanted until late in the season. Up to recent times, the prices paid for Delicious in America have not justified substantial shipment to the United Kingdom, where no more is paid than for other red varieties.

#### Packages Must Contain Uniform Grades

The markets require all standard grades without combination of the grades in the same package. Usually a combination of grades packed together realizes little more than the price paid for the lowest grade represented in the pack. This applies especially to boxed fruit. It, therefore, pays to pack the grades separately.

The most interesting thing about the British apple market is that they prefer the small and medium sizes, extreme large sizes being discounted. This is the reverse of the American market, and thus makes that outlet extremely valuable because of the great quantity of the smaller sizes produced in the United States.

Required Size - In barreled apples the preferred range is 2-1/4 to 2-3/4 inches inclusive, in transverse diameter, graded to quarter-inch sizes. However, Glasgow and other extreme northern markets usually discount 2-1/4 inch fruit. The preferred size for the southern markets is 2-1/4 to 2-1/2 inch inclusive, and the midland markets prefer the full range. The preferred sizes vary somewhat from year to year, as for instance, during the season, 1922-23 due to heavy shipments of extreme small sizes from the Pacific Coast, 2-1/2 inch minimum barrel pack has been demanding a premium over 2-1/4 inch minimum.

In boxed apples the preferred range is counts 138s to 200s in the Glasgow region, 150s to 216s, Midland, and 175s to 225s in the South, with some

overlapping. Boxed apples must always be wrapped, each fruit separately, and packed by tiers. "Jumble", or "face and fill" packs, are not wanted. It is interesting to note that Colorado, which produces very fine Jonathans, Winesaps, and other varieties, does not participate in export trade, due to the fact that it is the general custom there to pack without wraps.

The packages required are the standard apple barrel for eastern orchards and the box for western orchards. At times half barrels have been used with success, but they are rarely exported now. Various experiments have been made with baskets and various other kinds of containers, but it is very difficult to get away from the barrel and standard box. Some eastern growers have attempted to use the box. So far, it has not paid, because the markets are accustomed to the barrel for eastern apples, and expect to find in a box pack the superior finish and beauty of the western product. In a sense, the eastern barreled apple and the western boxed apple are different commodities. To illustrate, when there is a heavy supply of barrels with a short supply of boxes, the markets pay a relative premium for the former, and vice versa.

Excepting Gravenstines and sometimes Jonathans, shipments can be made successfully in ordinary space, until late winter or early spring, when refrigerator space ought to be used for the majority. The foregoing applies to shipments from the Atlantic ports. Refrigeration is necessary from the Pacific Coast through the Canal.

Pears — The number of pear varieties exported to Great Britain is not so extensive as for apples. The principal varieties are:

Comice	Hardy
Bosc	Winter Nelis
Anjou	Clairgean
Bartlett	Keiffer

The Keiffer is used almost exclusively as a "cooker."

The requirements as to grades, packages, and packing are practically the same as for apples, with the exception that for Pacific Coast pears, the so-called "half box" is also used for the fancier varieties, especially by California.

The sizes required for barreled pears are about the same as for apples with a leaning toward larger fruit. In boxes the preferred sizes are 125s to 150s for standard boxes, and 45s to 65s for half boxes. London is usually the best dessert pear market, especially for the box pack. Pears should always be shipped under refrigeration both railway and steamship, and in the latter case, the temperature should be held at about 31 degrees Fahrenheit if possible, but not lower.

Oranges - It is to be noted carefully that there is not, and possibly never will be, a large demand for American oranges in the British markets during the winter, because normally they are heavily supplied by Spanish and Mediterranean oranges, against which America cannot compete successfully.

Therefore, Florida and California Navels, both winter oranges, though shipped some seasons in very small quantities according to conditions, will never be a factor excepting in seasons of crop disaster in the competing foreign regions mentioned, and excepting during the latter part of the American season when the competition is less, as for instance in March and April.

#### California Valencias Best Suited for British Trade

The California Valencia orange, which matures from April to October, is the best suited for the British trade because of its season, and while the average annual shipments have been small, there are believed to be considerable possibilities of greatly developing the market. Not many years ago

a summer orange was practically unknown in the American markets, but now the summer markets consume as many oranges as the winter markets. The Valencia, backed by the splendid work of the California Fruit Growers Exchange, accomplished this great feat.

The history of the Valencia in the American summer markets indicates the possibility of developing the summer markets of Great Britain where, until very recent years, a summer orange has been a distinct novelty. However, there is this difference, namely, South African and Australian production has greatly increased with still larger production in prospect. South Africa depends largely on the summer markets of Great Britain, Australia in a limited way.

For South Africa, transportation costs have been much less than for California, on account of British subsidy, but it is believed that with the greater development of the Panama route, the freight differential may gradually disappear. Furthermore, the Valencia is of superior quality and pack as compared with South Africans, and accordingly sells for considerably higher prices.

Intensive marketing methods, backed by regular shipments with gradual increases from season to season, even though at some loss in the beginning, undoubtedly would result in building up a large market from late spring until early autumn. As to quality, certainly for the present the very best is required. Later, as the orange comes into greater summer use, cheaper grades may find a good outlet.

The standard California orange box strapped at both ends, is used, but built somewhat stronger for the export trade. The preferred sizes of fruit are approximately counts 150s to 216s, heavy to the middle range. Each fruit must be wrapped in paper and packed to tiers. Refrigerator space should be used. Experiments with temperatures are not yet exactly conclusive, but it appears that 40 degrees is about right.

Grapefruit - Grapefruit, though consumed largely in the United States, has been used very little in Great Britain. So far London has been the chief market, taking small quantities from Christmas until late Spring. Naturally the very best quality is required. The Florida product is well liked, and with proper methods, it is believed possible to build up a considerable outlet.

The British consumer likes acid fruits, but the uses to which grapefruit is put are rather limited so far. The consumers are not accustomed to a breakfast fruit, in which capacity this product is so largely used in the United States.

The standard Florida box is satisfactory for this trade. However, the box should be built stronger for export. Each fruit must be wrapped, and packed to tiers. At present, the preferred sizes are counts 64s to 96s. In the winter, the fruit carries very well in ordinary space on fast steamers, but in warmer weather, refrigeration is required, at a temperature of about 40 degrees.

Peaches - The peach is popular, but the very finest, without blemish, is demanded at the present time, because the markets have been accustomed to the hot house or fruit garden product of domestic and Continental production, for which they pay very high prices. In recent years considerable quantities have been coming from South Africa during the winter, but these are beautifully graded and packed in one tier boxes with wood wool to protect the fruit from bruising. Furthermore, the specimens are so packed that they do not touch each other, and are sized with absolutely uniformity.

The California one tier box is believed to be satisfactory for this trade, if the fruit is packed with wood wool in accordance with the South African method. The other kinds of packages used in America are not suitable, and experiments with them have been unsuccessful. The British people insist upon



having what they want, and as yet it seems that no substitute can be found for the one tier peach box, wood wool pack.

### The Elberta Variety Best Suited for Export

The Elberta variety is believed to be suited to this trade, if only the very finest quality and color is selected. This variety is grown more widely in the United States than any other variety. Earlier and later freestone varieties of the hardiest kinds probably could be introduced also, if of superior quality and color. The British markets require peaches of fine flavor. Unfortunately, the Pacific Coast Elberta, though of fine texture and well suited to long shipment, lacks flavor and it loses quality during the long journey. The Eastern peach, though of better flavor, is not such a good "keeper," and requires the utmost care in selection and handling.

The medium sizes are best. The fruit should be precooled and carried under refrigeration to the foreign destination. Experiments have not gone sufficiently far to establish what is the proper temperature, but naturally the fruit must be kept very cold.

Many persons believe that it is impossible to develop a substantial market in the British Isles for American peaches, but others feel that if the fruit is selected and handled in the manner outlined above, it ought to be possible to build up a market gradually. Although there is usually a generous supply of summer fruits and Australian apples in the markets during the American peach season, there are very few peaches and they generally sell extremely high.

The venture of introducing the American peach is believed to be well worth while on the part of eastern peach growers organizations, from Georgia to New York. It would require continued persistent

effort from season to season for quite a long time to accomplish the feat, but it possibly might result in creating a new market, which in many seasons is very much needed. It is a matter that will have to be handled in a well organized way.

Grapes - The British grown grape is largely a hot house product. They have been accustomed also to the hot house product from Northern Europe. They are very fine and sell very high. The chief supply is from the open vineyards of Spain and Portugal, primarily Malagas and Almerias, packed in 100-pound drums with cork. The student has seen these products in American fruit stores.

The California Emperor is best suited for the British markets, but so far experimental shipments have not been very successful because the fruit did not arrive in very good condition, due possibly to lack of proper care in selection, packing, and handling, as well as to improper temperatures. The 100-pound drum with red wood sawdust, as used in California, is satisfactory. Large clusters of perfect fruit should be selected.

The Spanish and Portugese seasons being similar to California, grapes from the Golden Gate state would appear in the markets at the heaviest period of the year during the autumn and early winter, and at a considerably higher cost than the competing product. However, the beauty and finish of California's best, it is believed, would meet with a fairly good demand if delivered in good condition, especially in times of European crop shortages, because this product is more like the hot house product than any grape grown, and would appear in the markets at a time when there are no hot house grapes available.

Needless to say, the grapes must be precooled and shipped under refrigeration all the way. The experiments with shipments so far have not been conclusive as to the temperatures which are best,

but of course, the fruit must be kept as cold as possible without injuring the product.

Plums - The plum is very popular. The Green Gage of home production predominates, its season being late summer to early fall. When the British crops are short, there are excellent opportunities for American plums, and considerable quantities of Californians and Northwesterns have been received during such seasons. It requires a hardy variety like the Kelsey or prune to carry in good condition so long a distance.

The generous size of the Western plum is well suited to this trade. The so-called "suit case" box, standard on the Pacific Coast, seems well suited for the trade. Special care is necessary in the selection and handling of the products. The fruit should be packed by tiers as is the usual practice on the Coast. The fruit must be shipped under refrigeration, with a steamer temperature of about 33 degrees.

#### A Word About Sweet Potatoes

The sweet potato of American fame, is little known in the British markets. Occasionally very small shipments have been received from elsewhere at London. A few experimental shipments have been made with success to the same city from the state of Georgia.

The kiln dried product of medium size and best quality has proved to be best. It arrives in prime condition as late as March. Unless kiln dried, the potato does not keep well. Experiments have been made with crates and hampers, and shipped in ordinary space. The hamper proved to be the best, because less bruising was apparent. However, it is a question if the hamper is very suitable for steamer handling and stowage. Possibly the standard potato barrel would prove to be the most suitable, or still better, the special crate described in Lesson 16,

in connection with the Latin American potato and onion trade.

Since the sweet potato would have to be introduced in substantial quantities to test the possibility of the markets, opinion varies as to the prospects for this product. However, its delectable qualities and excellent food value would seem to commend it highly, and those who have given some attention to this matter are of the opinion that continued persistent effort might result in creating a valuable market. It is largely a matter for producers marketing organizations to follow up. It has been difficult to interest individual growers and shippers. United action backed by intensive marketing methods would be necessary.

### THE TWO PRIMARY TYPES OF EXPORT TRANSACTIONS

There are two primary types of export transactions in the business with the United Kingdom:

1. Open consignments
2. F.O.B. or C.I.F. sales

These two types apply in many directions other than the British Isles, but it is of especial importance to treat them just here.

#### Consignments

For more than half a century the United Kingdom has been accustomed to receive the great bulk of its foreign fruit and vegetable supply on open consignment for account of the foreign shippers. The American part of the trade is no exception to the rule. This custom has been so thoroughly established and the Britisher is so disinclined to any drastic change of custom, that it practically is necessary to follow the consignment system if the shipper desires to undertake a consistent direct marketing program.

It is very evident that as long as the United Kingdom can secure its fruit supply largely on a consignment basis, we cannot hope to do a substantial f.o.b. business, certainly insofar as the resident trade of the United Kingdom is concerned. Therefore, to properly handle and develop that market for specific brands, it is highly important to follow the established customs, making sure, of course, to know the conditions of the trade, and to utilize services or to perfect services which will secure the best possible distribution, and the best possible results.

#### Keen Competition for American Consignments

The competition among the British receivers and their American houses, or connections, in securing American consignments is extremely keen, and some of them are not always considered very ethical in their methods. The answer of such firms is that the severity of competition forces them sometimes to do things which they do not exactly like to do. However, one thing that is sometimes done is inexcusable, namely, over-quoting the market, or quoting simply the exceptional sales of very fancy packs as representative of the market as a whole, thus attracting consignments.

A rather common practice is the making of "confidential" rebates to American shippers out of the service charges. Usually this rebate amounts to 2%, and it is used especially as a bait for large shippers, though the payment of rebates is by no means limited to them. On the other hand it is used occasionally as a hoax to grower exporters as well, who are made to feel that they are getting something for nothing.

Advancing Payments - One of the most prevalent methods of inducing consignments is the system of making advance payments to the suppliers when the shipments are made from America. This is adequately covered under head of "Financing Foreign Trade."

Although admitting the aid of the advancing system in financing the movement of exports, it is believed to be an evil, and not a really "necessary evil." There are several reasons why it is believed to be an evil, the most important of which is that the advance attracts a great many shipments which should not go to the British market.

When the growers, or other shippers, meet with difficulty in selling to the domestic markets at what they regard satisfactory prices, and the export solicitors offer to put up money on account as an inducement to export, a great many of the suppliers take the offer for the sake of getting what looks like "easy money," and with this thing going on all over the country, it requires no rare imagination to understand what is likely to happen. The practice is believed to be responsible for many a serious "glut" in the British markets.

In many quarters, the size of the advance offered sometimes seems to be the standard by which the shipper measures and selects his receiver. The question as to whether the firm is fully reliable and efficient, or is in a position to secure the best results, is not always considered.

#### F.O.B. or C.I.F. Sales

There are, of course, many export buyers in the United States, but the majority of them are branches of British houses, or are resident agents for such houses. These houses buy large quantities either f.o.b. cars at shipping point or f.o.b. steamers. The term "c.i.f." means that the seller must attend to all shipping arrangements, pay all freights and insurance, both inland and ocean, and assume all risks in transit. Few shippers are willing to sell on the c.i.f. basis, preferring to consign their shipments for sale in the United Kingdom, rather than take the speculators price on a delivered basis and wait so long for the money.

F.o.b. purchases for export, as a rule, are purely speculative transactions on the part of the buyers, because it is rare that they in turn resell the goods on the same basis, but rather they almost invariably deliver the fruit to the United Kingdom on consignment, whether resident here or there, using the established selling facilities in the port markets just as the original American supplier would do if he were to export on his own account. Truly speaking, from the original supplier's viewpoint, the majority of f.o.b. transactions are not really export transactions, because his participation in the trade ceases either inland or at sea-board, yet many of them call themselves exporters.

#### Buyers' and Shippers' Account

It is especially interesting and important to note that practically all the export f.o.b. buyers also engage extensively in handling consignments for shippers' account. Also of interest is the fact that practically all the British consignment houses who have branches, or other connecting houses in the United States, mostly at New York, Boston, and in the Pacific Northwest, also engage more or less extensively in buying in America for their own account.

In other words, though there are two types of export transactions, one for shipper's account and the other for buyer's account, it is rare to find distinctive types of firms, that is, firms who are either exclusively agents, or exclusively buyers. Yet insofar as the receiving end of the business is concerned, for the most part, they either call themselves, or are called, "brokers."

In discussing some of the practices involved in the British trade, it is not meant to discredit the many splendid British houses whose principals are the soul of honor, and who endeavor to give fair play, just as they expect to receive fair play.

### EXISTING METHODS OF MARKETING IN THE UNITED KINGDOM

Insofar as the export shipper is concerned, there are two methods of selling consignments in the United Kingdom:

1. By auction
2. By private treaty

#### The Auctions

All of the port markets, as well as a few inland markets, have public fruit auctions, mostly of long standing. These auctions are controlled by companies consisting of a few of the largest fruit brokers in each market. There are specific sales days and the brokers previously make known to their trade just what is to be sold in order to secure the best possible attendance.

When the fruit is discharged from steamers, samples are selected at random from each mark after the goods have been classified as "tights", "slacks", "very slacks", "shakes", "wets", and so on. This classification applies especially to barreled fruit. The samples from each classification are dumped in the salesroom, the contents thus being fully exposed to the buyers. However, it is understood that the buyers are permitted to make previous inspections of the various lots on the docks, and with their private notations and with a full display of the samples in the auction room, the bidding proceeds.

When deliveries are made, if a given lot does not prove to be as good as the sample, the buyer has a right to demand adjustment or make a rejection within 24 hours. If the lot happens to be better than the sample, nothing of course is said, and the shipper loses. It is extremely important for you to bear this condition of trading clearly in mind in connection with certain suggestions which are made later, relative to proper methods of procedure.



In addition to the organization of auction brokers, in nearly every auction market there is a strong organization of buyers, with a large membership. It is understood that the rules and regulations governing the classification of packs as to condition, and governing the selection of samples, as well as the privileges under which the buyers may reject or demand adjustments, are controlled, as a rule, jointly by the respective organizations of brokers and buyers.

Some of those who have investigated the matter, have the impression that the regulations and terms of sale are more in favor of the buyers than of the distant shippers. Possibly this is natural because the buyers are present and strongly organized, there being great competition among the brokers to hold the patronage of the buyers, not only for American fruit, but for all classes of fruits and vegetables which the brokers handle from all parts of the world each sales day. It also is important for you to bear this condition in mind in considering proper methods for handling the British markets.

### Private Treaty Sales

What the Britisher calls a "private treaty" sale is the same as our American commission merchant sale, described earlier in this course.

In the United Kingdom there are more private treaty houses than there are auction brokers, although the private treaty firms handle through their stores the smaller percentage of the total receipts. Many of the private treaty firms are direct receivers, selling for foreign account direct from dock, or from warehouse and store, as do our American commission merchants. Some of these private treaty firms also sell for account of other receivers, and many of them in a pinch resort to the services of auction brokers to clear the business in a satisfactory manner.

There is keen competition between the auction brokers and the private treaty salesmen, each maintaining that their particular system is the best. This competition is no doubt a very good thing, because it possibly stimulates both types of salesmen to make the best possible showing for their respective methods.

Both the auction and the private treaty methods are of value, if used and properly co-ordinated under a comprehensive marketing scheme. Under certain conditions of supply and demand, the auction proves to be the best, and sometimes under certain conditions, private treaty sales are capable of exceeding auction results.

However, there is this difference for the shipper who has no special representation, namely, the auction sale is a public sale, and its price records are assumed to be kept inviolate under the auction regulations and the laws of the Realm. Therefore it is possible for the distant shipper to confirm the prices at which his goods are sold at auction, whereas it practically is impossible for him to confirm the prices in the case of a private treaty sale.

In other words, the publicity attached to public auction sales, and the careful price records kept by the majority of the auctions, offer a better assurance of fair play than merely the account-of-sales of a private treaty firm.

#### Lack of Distribution and Resulting Price Differentials

Within the past year, one of the ablest fruit sales agents of the United States, who visited the British markets, made the statement that he was extremely surprised to discover such an extensive lack of distribution in the United Kingdom, as compared with the United States. His conclusion in this respect strongly confirmed what other careful investigators have found to be true.

### "Dumping," A Common Practice

Enormous supplies of fruits and vegetables are "dumped" at the principal ports markets, primarily Liverpool, London, Glasgow, and Southampton. As a general rule, all the goods are immediately placed on sale largely through the auctions of these ports, and their distribution in the interest of the shipper usually ceases.

These auctions are attended by nearby buyers and a great many speculators, who are reported to have found very considerable profits in taking advantage of these conditions. It seems not to matter whether some other market would make a better return to the shipper, or whether next week's market or the week after next market would pay a better price in view of smaller arrivals.

In this connection, British cold storages have been used very little. Strangely, it has been reported to America that cold storage is not available and that under any circumstances the British are prejudiced against cold storage products. This report is untrue in both respects.

### Why Wide Price Differentials Prevail

It frequently occurs even among the port markets, that due to the inequality of quantities shipped from North America to the principal ports, one port may be glutted and another port shy. It is readily realized that this condition of supply makes for wide price differentials, although the distances between ports are not great, and the inland transportation facilities are excellent. It has been observed that one port market sometimes pays in a given week for barreled apples from \$1 to \$1.50 and for boxes 50 cents to \$1 more than another port market. Yet under the prevailing system used, the American shipper who has consignments in the lowest port market, very rarely gets the benefit of the higher port market.

Similarly, it frequently occurs that the prices in the many important inland markets are far better than the prices in any of the port markets. But again, under the prevailing practice, the American consignments are with rare exception, sold in the port market and not in the inland market, notwithstanding the fact that there are excellent local selling services to be found inland.

It would be very interesting to the American shipper if he could really look into what happens to the fruit after its sale in the port markets, and see who receives the benefit of the large differentials in prices which, frequently occur among the British markets. The profit goes to speculators who operate in the port markets, whichever is the lowest; to inland dealers, who buy in the ports for their respective markets; and it has been said that some of the receivers themselves sometimes take over the goods on the basis of their port market, and take advantage of the better markets on their own account. If this is done, as is reported, the receivers who engage in such traffic no doubt believe that it is legitimate to account to the shipper only on the basis of the port market where the goods were received. But it certainly is not in the interest of their American principals.

### Market Development Possibilities

The means of intensive distribution and market development work in the United Kingdom are considerably better than in the United States. Because of the densely populated country, which abounds in large cities and towns, there is available fast freight transportation with railway cars holding about one-third the quantity of the American car, thus enabling distribution of smaller quantities in carload lots. Yet strangely, as indicated, the British receivers have not taken advantage of these conditions in the interest of the American shipper, and few changes in the system have been made except-

ing in one or two instances where persons, mostly from the outside, have been sufficiently enterprising to realize the possibilities of introducing modern American fruit distributing methods.

### HOW TO HANDLE THE BRITISH MARKETS

The suggestions given below for handling the British markets are based upon an actual experience of some years in dealing with those markets, and very largely comprehend a well tried system which has proven very successful indeed. It is noteworthy that the system is strictly of American origin and American management. The suggestions include:

1. Central management
2. Utilization of established mediums
3. Regular supplies
4. Distribution
5. Control and supervision of sales
6. Publicity and advertising

#### 1. Central Management Important in the United Kingdom

In view of the fact that the operations of British houses are practically all local, the first recommendation is that consignments of fruits and vegetables to the United Kingdom should be handled over there by a special representative with broad powers of central management and control. Central management secures a very necessary coordination of the market demands and facilities, and assures broad information and conservative advice based upon the situation as a whole.

Needless to say, it is necessary that the central manager be thoroughly experienced in the British markets, and possessed of tact and judgment of a high order. It is also important that the management should be American, thoroughly imbued with the American viewpoint and the spirit and needs of the American industry.

## 2. Utilization of Established Mediums

In the British markets it is especially important for the central management to utilize the established trade mediums. The trade being well organized, both among the brokers and the buyers who attend the central markets, and practically all of them being opposed in the stolid British way to change of custom, any attempt on the part of American exporters to go around them in handling consignments is likely to meet with failure.

There are excellent houses in the various port and inland markets who do primarily an agency business, and with proper selection, excellent results can be secured.

## 3. Regular Supplies Important

Owing to the marked "ups and downs" of the British markets as a whole, it is necessary for the American shipper to keep regular supplies of his brands in the markets during a given season, making certain to deliver each variety in its proper season.

The majority of shippers are inclined to wait for a high market before shipping, apparently overlooking the very likely fact that all other shippers are inclined to do the same thing, with the result that when the shipment arrives, the market is likely to be low. Then when the market is low, he sees little encouragement to ship, apparently not realizing that the low market affects nearly everyone else in the same way, with the result that the supply greatly decreases, and the market booms again, at which time the shipper is likely to start all over again.

Not knowing the quantities due to arrive in the United Kingdom from time to time until some days after the steamers have cleared American ports, it is extremely difficult to arrange shipments to arrive on the peaks of the market. Therefore, the wise

course is to keep conservatively regular shipments constantly on the way, if the economic conditions of the season as a whole are favorable to utilizing those markets. This method assures the general average of the season's markets, which usually proves to be satisfactory.

#### 4. Distribution

It is probably unnecessary to recommend distribution among the British markets, because after studying the situation described under head of "Lack of Distribution," the student will have formed his own conclusion that distribution is essential to securing the best values in the United Kingdom. It is appropriate to state, however, that proper distribution can be secured only under a strong central management within the United Kingdom. It cannot possibly be accomplished by direction from America, because of the great distance and the impossibility of knowing the exact condition of the fruit, as well as all the "ins and outs" of the current conditions in the many markets.

The directions of the central management to the American principals should cover the billing of shipments to all ports, large and small, proportionately, of course, in the order of their consumptive capacity, and particularly in the order of their importance as distributing centers. At these ports, the central management should maintain its own inspection service independently of its local agents, the fruit to be examined carefully as rapidly as it is discharged. An intelligent knowledge of its condition is essential before deciding upon its disposition, especially when distribution to other markets is contemplated.

#### 5. Control and Supervision of Sales

One of the important functions of the central management is to control and supervise the sales. This is of great value in holding up the hands of the

brokers and preventing unwarranted sacrifice of the fruit.

It is important under certain conditions, to instruct the broker properly as to what and what not to sell, and when and when not to sell, as well as the minimum prices which are acceptable. This can be done effectively only by a central management, because such a scheme of control necessarily must understand not only the conditions of the local market, but also the markets of the United Kingdom and Northern Europe, as well as the quantities which are afloat to the various ports from all foreign sources of supply.

Incidental to sales control arises the question of selecting samples, and dealing with rejections or claims for adjustments. It is one of the duties of the central management to see that truly representative samples are selected from each lot, because the goods stand or fall on the merit of the sample. It also is an important duty to attend cases of rejections and adjustments in order that the interest of the American principal is properly protected.

## 6. Publicity and Advertising

It is important here to stress the value of publicity and advertising as a means of backing up the intensive marketing system outlined above.

It is rather surprising that practically not a dollar has ever been spent in the United Kingdom by American fruit packing and distributing organizations in advertising their brands. Some general publicity and advertising have been accomplished by the British Federation of Fruit and Vegetable Trades Association, but while this greatly helps to increase fruit consumption, it does not relate specifically to American fruit nor to American brands. The large suppliers of American brands would indeed do well to secure in the United Kingdom the most ex-



tensive possible publicity and advertising for them.

If the various methods of marketing recommended above, are followed with conservatism, intelligence, and diligence, they will produce surprising results. There is sufficient precedent to prove the case.

## PART II

### THE CONTINENTAL EUROPEAN MARKETS

Practically speaking, the only markets of present consequence for American fruit in Continental Europe are Norway, Sweden, and Denmark. There is a small trade with Holland, Belgium, and France, the latter rather spasmodic. The vegetable trade is spasmodic and negligible, and always will be.

Before the World War, Germany was our second largest overseas market — an excellent market, taking several hundred thousand barrels and boxes of apples and pears annually. However, Hamburg was the chief market for all Northern Europe, representatives of buyers from Scandinavia, Holland, and Belgium, being in constant attendance upon the great fruit auctions of Hamburg. Economic conditions have forced Germany out of the running for quite a time to come, but some day, with its economic stabilization, the German market will be restored partially — not wholly, because the countries of Northern Europe have learned to import more largely direct, and this, together with their import of re-exports from the United Kingdom, will keep their trade away from Hamburg in a large measure for all time.

### The Continental Fruit Industry

From north to south, Europe produces enormous quantities of deciduous and citrus fruits, and has a very considerable export trade, exclusive of exports among European countries.

Apples - Apples are grown all over as far south as Northern Italy and Portugal, with especially large production in Normandy, France, largely for the cider mills. Probably the best quality is produced in the Tyrol section of Austria, but outside of this district, the quality of the fruit is mostly very inferior to the standard American varieties, the cultural and handling methods being rather antiquated. European apples mostly are used for cooking purposes, with limited exceptions here and there, but when the continental crop is large, American cookers, mostly barreled goods, meet with severe competition, not only in the continental markets but also in the United Kingdom, owing to the price differential, which has been widened since the World War by high rates of exchange for American dollars.

As a rule, when the continental crop is an average yield or better, the demand upon America is rather inactive, until winter time, excepting for the very finest quality of box and barrel fruit, this trade beginning in October or November and taking on special activity in Norway and Sweden for the Christmas market. Usually Denmark begins to import substantially after the first of the year. This is also true somewhat for Belgium and Holland. The French demand is always more or less spasmodic.

Pears - As to pears, France excels all other European countries in the production of this fruit, and with its large production of Williams (American Bartlett), is a serious competitor of America in the United Kingdom during the autumn. Pears are, of course, grown in many of the other countries, but all of the markets depend very considerably upon France.

Plums and Grapes - Plums and prunes are plentiful, particularly in France and Italy. The French and Italian dried prune industries are substantial and rather old. Grapes are grown everywhere, both

for the table and wineries. In northern Europe the production is confined largely to hothouses and the sheltered walls of fruit gardens. In other favored sections open vineyards abound. In Spain and Portugal the production of table grapes abound, such as the Malaga and Almeria, and these regions are the sources of supply largely for northern Europe and the United Kingdom, with a large export business with the United States and South America.

Citrus Fruit - Citrus fruit growing is an ancient industry of the Mediterranean region, centering in Sicily for lemons and in Spain for oranges. There is quite an orange industry also in southern France. Italy exports lemons to all parts of the world, its distribution being accomplished to more countries than the American apple. For years in the American market, the Italian lemon has been a keen competitor of our own lemon production and American producers lately have sought and secured a protective tariff against them. Italian lemons are in the European markets the year round.

The production of oranges supplies the European, as well as the British markets during the season, which extends approximately from November to May.

Vegetables - As to vegetables, European countries excel in their production, and in the cool climates of northern Europe, hothouse production is a rather large industry. Potatoes are bountiful everywhere, and frequently considerable quantities are exported to America, particularly from Denmark. There has been a substantial trade of long standing with South America, which, of course, was interrupted by the World War. Spain is the onion center of the continent and exports annually very large quantities to the United States and other countries, the supply in the markets generally not being exhausted until late February, when it is followed by Egyptians.

### The Import Trade in American Fruits

The principal import markets of northern Europe, where our fruit trade is practically all confined, are Christiana, Gothenburg, Stockholm, Copenhagen, Rotterdam, and Antwerp, more or less in order of importance. There is a considerable trade with Bergen, and also some trade with Amsterdam. Paris is practically the only market in France.

The cities named are large, and they have innumerable tributary markets within their respective countries, making altogether an enormous total population that can be reached with our products. With the exception of the French, and possibly Belgians, the people of northern Europe are large consumers of fruit in many ways, and the markets are believed to be susceptible of considerable expansion. They are very considerably short of the high rate of American consumption.

### Why France Is Not a Good Market

One would think that France, being such a large country and nearest to America, would be a substantial market for America, but this is not the case. France is one of our very poorest markets, for the reason that they grow a great variety of fruits, with similar seasons for all but the California Valencia orange, and for the further reason that France does not use fruit in the numerous American or British ways. Fruit shops as we know them are scarce. You rarely see any one eating fruit between meals, and if you do, it is a pretty good sign he is an American tourist. They do not use fruit extensively for baking, pies, and tarts, and in numerous ways as in America. The apple and pear is a favorite dessert fruit.

The fruit gardens surrounding Paris, produce first quality deciduous fruits of all kinds for the limited dessert trade, and absolutely perfect fruit is required. Possibly the cheapness and excellence

of French wines and ciders are partially responsible for the discouraging state of our fruit trade with France, because they are largely used by people of all ages and thus take the place of fresh and cooked fruit acids. In addition to all this, the French people are thrifty and do as little importing as possible. They are really extremely independent in practically all agricultural lines.

### What Is Imported from America

The American fruit import trade throughout northern Europe is confined very largely to apples, with occasional small shipments of pears and oranges. It is especially interesting to note the relatively large increase in our exports of apples to some of the continental countries in 1920, with still larger amounts in the past two years, as compared with the pre-war trade, remembering that following the World War up to and including 1920, the rates of exchange for dollars were extremely high, the rates in one or two countries being at one time nearly double normal. This condition was most serious in 1920 for Denmark and Norway, and has been so for Belgium and France during the past four years.

The following table shows the position in 1920 as compared with 1913:

TABLE IV. DIRECT AMERICAN EXPORTS TO NORTHERN EUROPE DURING 1913 and 1920

	Apples	Pears	Oranges
Importing:	(bbls.)*	(dollars)	(bxs.)
Countries:	1913 : 1920 :	1913 : 1920 :	1913:1920
Norway	: 14,628:67,434:\$	810:\$	757: none: 78
Sweden	: 3,926:14,432:	7125: none:	" : 9
Denmark	: 17,439:12,982:	5425: 12:	6: 3
Holland	: 1,584: 3,092:	none: 1361:	7: 27
Belgium	: 1,288: 153:	1510: none:	14: 480
France	: 2,308: 642:	2831: "	: 29: 4
Germany	:272,383: 50:	466: 143:	1715: 7
TOTAL	:313,556:98,785:\$18,167:\$2,273:1,771:		608

\*Includes boxed apples, counted as 3 boxes to the bbl.

The above table is enlightening as to the loss of apple trade caused by the war. Before the war, exclusive of Germany, Denmark was our best direct continental market. In 1920, the exports to Denmark were low, due to the exchange situation, labor strikes, and the post-war unrest which affected Denmark more than the other Scandinavian regions. The torn condition of Belgium and France is sufficient reason for the off fall there.

Since 1920, the fruit trade with Scandinavia has been quite active, and some headway was made in 1921 with direct shipments of oranges to Rotterdam, from where limited distribution was accomplished to Belgium and Scandinavia. The pear trade is limited, not because there is a lack of demand, but primarily because there is practically no refrigerator accommodations on the steamers to those countries. Negligible quantities of grapefruit have found their way to northern Europe, but mostly as ships stores.

It must not be overlooked that the northern continental countries take very considerable quantities of American fruit indirectly through the United Kingdom. Before the world War, Great Britain vied with Germany in this trade, and since the war the interrupted British trade has resumed, but all in all, the war has proven to be a great benefit to America's trade with the Scandinavian countries, because of the more direct relations established thereby. Belgium and Holland, however, will continue to secure their supplies largely by re-export from the United Kingdom.

#### Varieties, Grades, and Sizes Demanded

Apples - The most popular varieties of apples in the northern European countries are the barreled and boxed Winesap, boxed Newton, Spitzenburg, Ortley, and barreled Baldwins and York Imperial.

Of the Winesap, the Virginia barrel pack is possibly the most liked because of its very superior

flavor, but the Northwest box pack is taken in very large quantities because it is regarded as being more dependable. The Maine Baldwin is preferred, with the Western New York second, the York Imperial being from the Appalachian region. The great bulk of the trade is in Northwestern boxed goods.

One of the favorite varieties for Germany is the Virginia Ben Davis. Very large quantities of these were shipped there before the World War. The York Imperial and Baldwin, if well colored, are also favored in Germany, and practically all the standard varieties of boxed apples do well there, but only the red varieties are demanded as a rule. For all northern European countries, the so-called "red varieties" must be highly colored to do well.

Best quality only is demanded. There has been no market here for "C" grade boxed, and "B" grade barreled fruit, nor do the markets take any but a small percentage of Northwest "Fancies". The extra fancy pack is almost invariably wanted. The sizes demanded are somewhat as follows:

Christiana - barreled, 2-1/2 to 2-3/4 inches, some down to 2-1/4 inches minimum - boxes, mostly 138s to 163s, with some 175s to 216s

Gothenburg - barrels, largely 2-1/4 to 2-1/2 inches, boxes largely 175s to 216s

Stockholm, largely same as Gothenburg

Copenhagen - barrels 2-1/4 to 2-3/4 inches, boxes 138s to 225s with only a few of the smallest

Rotterdam - barrels 2-1/4 to 2-3/4 inches, mostly 2-1/2 inches minimum, boxes, mostly 125s to 163s

Antwerp - medium to small sizes, mostly medium

France, medium sizes

Other Fruits - The limited trade in pears has called almost entirely for Northwest box pack. The

varieties are about the same as mentioned for the United Kingdom. Best quality only is wanted. The sizes required run largely to medium sizes, with 120s or 125s included. The orange trade has been confined to California Valencias, which meet with less competition than do Navels. Best quality is wanted, and the medium sizes are usually preferred. The grapefruit is little known, but sizes 64s to 96s, of the best quality Floridas would be best suited for this trade. Being a decided innovation, considerable work would be required to introduce it commercially.

### THE METHODS OF TRADING

In Norway and Sweden, and to a considerable extent at Copenhagen, the supplies of American fruit are purchased f.o.b. steamer New York, through resident commission agents from their American or British connections. The Norwegian and Swedish markets are not susceptible to the open consignment business. The fruit merchants are opposed to it, and practically all attempts to establish auction facilities are threatened with a boycott on the part of the merchants.

### Consignment to Commission Agents

There are excellent commission agents in the largest markets of the three countries, and upon receiving quotations from their foreign connections, the agents solicit and cable the orders for specific steamers or for shipment during a given period. The orders may represent a number of buyers, and the goods have to be marketed accordingly.

The American exporter usually bills the shipments to his commission agent, with separate sets of steamer bills of lading for each mark, insuring the goods c.i.f. plus basis, and drawing at sight on the commission agent for the gross amount of the f.o.b. steamer sale, including the agent's commis-



sion, which is remitted to him by check or New York Bank Draft.

This is a very good method for the exporter, because the commission agent assumes responsibility for payment, and if care is exercised in selecting an agent, it is not so risky as drawing upon individual buyers whom the exporter may know little about.

### Open Consignment Markets

Copenhagen, Rotterdam, and Antwerp are open consignment markets, as well as f. o. b. markets. At Copenhagen, there are several excellent large fruit and produce firms with well conducted auction facilities, pretty much on the order of the best British auctions. And when the continental crops are largely out of the way, excellent results can be secured at Copenhagen with consignments for shipper's account, the best of the Danish firms being very conservative in advising shipments.

There are good marketing facilities at Rotterdam and Antwerp, and under normal conditions, these are fairly satisfactory consignment markets, though they are far more affected by apple re-exports from the United Kingdom than are the other continental countries, and deserve to be watched for that reason.

In France, at Paris, the marketing facilities are good, but the trading mediums are small. Surrounding the great Huyler market, which in the early morning hours is devoted to wholesale or jobbing, and later to retailing, are a number of dealers and small commission merchants whose establishments remind one somewhat of similar establishments in small American cities. They operate on the Paris market alone, largely through the Huyler market, and operate almost exclusively in French fruits.

In no sense are they distributors, but every now and then they take a "fling" in outside fruits, and were especially interested in American fruits during the war owing to so many Americans and British being

there. Good commission agents, or brokers, can be found in Paris who handle staple American lines, and apparently it would be best, in the beginning at least, to work through them in undertaking trade in fruits.

### HOW TO HANDLE AND DEVELOP THE CONTINENTAL TRADE

The foregoing analysis of trading methods in continental European countries readily suggests how the trade is handled in the several markets. Where trading is at present active, an exporter desiring to participate has but to form proper connections to suit the existing customs as outlined above, give to those connections every possible assurance of experience and trustworthiness in the business, and proceed to do business. However, the markets although free for all, are worked hard by a number of American exporters, and relatively a few export firms control the bulk of the trade.

### Opportunity for Northern Europe Market Expansion

From the viewpoint of the American fruit industry as a whole, the markets of northern Europe are not worked intensively. They are believed to be susceptible of very considerable expansion for apples, pears, plums, oranges, and possibly grapefruit, but with little or no chance for vegetables. Intensive methods of distribution well supported by fruit exhibits and appropriate publicity, undoubtedly would greatly expand the markets. The population is there, a relatively prosperous population in normal times, but no concerted attempt has ever been made either by Americans or the immediately interested Europeans to develop the outlet. Who ever heard in those countries the well known American slogan, "an apple a day keeps the doctor away", and so on? The markets have been left pretty much to look after themselves, after the fashion of most of our foreign markets, insofar as the American fruit industry as a whole is concerned.

### Consolidate Under Central Management with United Kingdom

In treating the British markets, great stress was laid upon the real importance of central management and control in those markets. Keep this in mind for a moment. It has been noted that the markets of northern Europe draw considerable supplies of American fruit through the United Kingdom, as well as direct. In dealing with the Continent, it is highly important to know clearly the conditions in the United Kingdom. If you are consigning fruit to Copenhagen or Rotterdam, for instance, without knowing British market conditions, on the spot, just as likely as not by the time the consignments arrive they will be overwhelmed with re-exports of Americans and Canadians from England. Suppose, when the consignments reach Rotterdam and Copenhagen, those markets should for some reason be bad or closed by strikes, as sometimes occurs, and it is necessary to tranship to England or sell f.o.b. Rotterdam and Copenhagen to other continental markets. How is it to be effectively done?

Again, suppose that serious trouble arises upon deliveries of sold or consigned fruit to any of the continental markets, and you are 3,000 miles away, what are you going to do about it?

Suppose that, as frequently happens every year, the British markets are seriously glutted, with little chance of improvement in time to absorb shipments there without heavy loss. What would you do about it?

Since you have studied the recommendations for the British markets, are not the answers to the foregoing questions apparent? It, therefore, suffices to say that the markets of northern Europe must be coordinated with the markets of the United Kingdom, just as the large domestic distributing organizations of the United States coordinate the markets of this country under a central management.

The central management outlined for the United Kingdom, should be extended to the continental markets in order to secure the best all round results, and if the continental business justifies, a branch office during the fruit season would be highly advisable for either Christiana or Copenhagen to cover all the Scandinavian markets, but it should be a branch of the British office, and strictly under its control.

Some representatives of American fruit interests who, since the World War, have made flying trips to northern European markets, with a day here and a day there, have reported that it is impracticable to deal with those markets through a British office, on account of certain prejudices against things British, and a preference for direct relations. Some of their principals who formerly worked through a certain well known central management at London, were persuaded by these casual observations to do business direct. But in practically every case it has met with undesirable results for the reason that American interests are too far away, and too unfamiliar with conditions and personnel to get best results. It is possible for the central management at London to keep alive the personal contracts, which mean so very much more in Europe than in America, and in case of trouble to have a representative on the spot anywhere in northern Europe within about 24 hours.

### PART III

#### IMPORTANT STEPS AT THE AMERICAN END

Having reviewed the principal foreign markets for fruits and vegetables, studying their conditions, demands, and methods of trading, we will here discuss the many important steps which have to be taken from the American end, in order to handle export trade successfully. In some respects, all too little attention has been paid by Americans to the

American end of the business. To a considerable extent, lack of proper attention to the details of exporting has been responsible for the dissatisfaction expressed in some quarters.

When the exporter, whether grower or sales manager, has informed himself thoroughly as to conditions abroad and he has established satisfactory trading connections, either direct or indirect through American export distributing agents, what are the steps then to be taken?

### Quoting and Confirming

If it is to carry on a firm sales business, keep your current quotations, f.o.b. steamer or c.i.f., constantly before your foreign connections in accordance with the peculiar requirements of each market. Keeping yourself informed as to what your competitors are quoting.

When orders or counter offers are received, if acceptable, book steamer space and promptly cable confirmation. It is dangerous to book space before confirming orders, because sometimes when you have confirmed, you may not be able to secure the space, with the result that you are liable to the foreign importer for nonfulfillment of contract. Similarly, it is wise to secure an option on space before quoting.

### Preparation of Goods for Shipment

When foreign orders have been received, or if you are simply undertaking export consignments for your own account, the next step is the proper selection grading, packing, and loading of the goods at interior points. Lack of proper attention to these details may mean rejections, or certainly loss of patronage, or otherwise low returns from the consignment markets, with general dissatisfaction to every one concerned.

See to it that the products are in sound export condition, and graded true with an attractive pack. Owing to the weight of the barrel pack, and the many handlings it receives, especial caution is required to see that it is packed extremely tight.

In the United Kingdom, for instance, a very slack barrel is sometimes discounted as much as four to five shillings per barrel (about \$1 to \$1.25) although the contents may be perfectly good. Boxes and crates must be strapped at each end with wires or soft iron bands. The packages must be stenciled plainly with special shipping marks, either the mark of the exporter or the foreign receiver. Usually the latter is best and is necessary in filling f.o.b. orders. These marks are for identification of the goods and must be inserted in the ocean documents.

#### Billing and Routing Shipments to the American Seaboard

Special railway billing is usually required on export shipments. At New York, for instance, export cars have to be lightered by the railways from their terminals to the steamship piers. All cars to this point should be billed "For export lighterage," otherwise they are likely to be delivered to local market piers from where they would have to be trucked at considerable expense. Each port requires special billing, according to location of railway and steamship terminals.

In routing the shipments, select the one which assures the best service and quickest delivery to seaboard, bearing in mind always to use the delivering line whose terminal is most conveniently located for specific steamship piers. Some inland exporters have undertaken to bill their shipments through to foreign destinations from the inland points, especially in the consignment trade with the United Kingdom.

This is regarded as bad business because the through billing always specifies one steamship line, though not a specific steamer. If the shipments miss the steamer they are intended for, and there is no steamer of the same line immediately following, then they must lie around the port sometimes for quite a long time, awaiting that line's next steamer. When the shipments are billed simply to seaboard for export, and they miss the steamer for which they are intended, then they can be booked for the first steamer of any line operating out of that port for the desired foreign destination.

### Steps at the American Seaboard

There is highly important work to be done at the American seaboard. This consists of steamer bookings, tracing of shipments, inspection, deliveries to steamers, supervision of handling, export billing, custom's declarations, and so on.

Not all steamers are good fruit carriers. Selection is very important, and this requires a knowledge of specific steamers. The freight market has to be watched carefully in order to see that space is assured before the shipments leave inland points. Sometimes the space is scarce, other times plentiful. Foresight has to be exercised. The space is booked on firm contract with the line. This is best attended to through the medium of freight brokers, whether or not the exporter has an office in the port. The broker's services are paid for by the steamship company.

Tracing - When the shipments are once on the way to seaboard, it is wise to have them traced from there in order to assure quickest possible deliveries, and to rearrange space engagements in case the tracings show that a given shipment cannot arrive in time for the steamer for which it is intended.

Inspection - Considering that the products are perishable, that sometimes they have undergone very

long inland journeys with a long voyage ahead of them, and remembering that many things can happen to the products while in transit, either from natural causes or carelessness on the part of the railway and ocean carriers, see to it that the goods are carefully examined by a competent inspector, with a written record of the condition, before the goods are delivered to steamers.

Inspection sometimes shows that the fruit is not in condition for export, in which case it should be sold promptly in the port market. And then the inspection serves as a valuable check on the railway, the steamship, and the foreign receiver, and many times saves trouble and losses. Yet in spite of the great importance of this step, the bulk of American export consignment shipments in the past have been forwarded on their long journeys without any one examining the fruit between inland points and foreign destinations. It is indeed no wonder that the percentage of loss from deterioration and other causes has been so very high in this trade.

Delivery - At the majority of American ports, the step of making deliveries to steamers is rather simple, because the piers and railway terminals are so situated that the original cars can be delivered by rail directly to the piers. However, at New York, owing to the necessity of lightering the cars, after the shipments arrive at the railway terminals, it is necessary to give "lighterage orders" to the railway before the goods are moved to the steamers, and sometimes careful supervision and considerable urging is required to avoid missing the steamers, especially in times of port congestion.

In connection with deliveries, whatever the port, it is important to supervise the physical handling, and to see that the goods are properly stowed when ordinary space is used.

Billing - When the shipments are delivered to steamer, then comes the step of billing them. The



steamship companies provide the forms, which indeed are very intricate, with innumerable clauses setting forth the conditions under which the goods are accepted for transportation and they are designed to protect the steamship companies from every possible contingency. However, under the law, the companies are held responsible for careless handling and stowage.

There are two methods of billing export shipments, and these are precisely the same as in the case of railway billings, by which is meant that the shipments are either billed to order of consignee, or to order of the exporter, in the latter case providing for notification to the consignee. The same form is used for both methods, but since practically all export bills of lading are required for banking purposes in connection with drafts on the consignee for the amount of the sale, or for freight money in case of consignments, it is necessary to have the documents read to order of shipper, because otherwise the documents are not negotiable. As previously stated, the bills of lading must always show the shipping marks.

When the bills of lading are presented to the steamship office for signature, the custom's declaration must accompany them.

Manifesting - Before the steamer sails, and if possible by previous posts, a complete manifest should be sent to the consignee, giving the brands, the shipping marks and a full description of the goods. This is particularly important in case of consignments, in order that the foreign receiver may know exactly what is coming forward. When it is definitely known that the goods will go by a specific steamer, then it is advisable to cable the receiver briefly just what is aboard.

Placing Insurance - When it is known that the shipments are to go forward on a specific steamer,

then it is necessary to insure the goods, always c.i.f. plus about 10%. The insurance usually covers marine and fire risks only. However, during and since the World War, war-risk insurance has been included.

In case of refrigerator shipments, it is important to insure risk of refrigerator machinery breakdown.

There are other insurable risks, such as delays in transit, and deterioration from any cause while under refrigeration. The last-named risk is rather costly.

In case the receiver has bought the goods f.o.b. steamer, or c.i.f., and opens a commercial credit for payment on this side or on his side, the question of insurance rests with him and his bank. Otherwise, it being necessary for the exporter to negotiate the documents to collect, his bank requires the endorsed insurance certificates, and the exporter adds the cost of the insurance to his invoice.

Some large exporters in the trade with the United Kingdom, arrange blanket policies covering the maximum amount of business which they expect to do in a given year, including inland and ocean transit, and a reasonable period at destination, under which individual insurance certificates are issued on specific shipments. This is a very high class method of handling insurance, because it assures the lowest rates of premium, and automatically protects the shipments in case of oversight in securing the individual certificates.

### Freight Brokerage and Forwarding Service

If the shipper deals direct with the foreign markets, how is he to take the steps described above as to handling the business in the port, if he happens to reside inland? The answer to this question is to use the freight brokers and forwarding agents.

The services of the freight broker in booking space has been mentioned. As to forwarding, the shipments can be sent to them, and they will make the deliveries, export declarations, securing and disposing of the ocean documents in accordance with the shipper's instructions. They can also insure the goods if required. For their services they charge a very small fee for each set of documents. As to inspections, however, they are not fruit men, and it is best to make separate arrangements for this work.

If the shipper uses the services of export distributing agents, then these agents attend to everything after the cars leave inland points.

### FINANCING EXPORTS

The financing of exports is a large problem. However, if the shipper uses the established export agencies, this problem is more or less simple, because it is handled by the agents.

If the shipper attends to his own exporting and has sold a bill of goods for a specific steamer, then he collects in accordance with the terms of sale, which usually must comply with the current usage in the particular foreign market where the goods are sold.

If the terms provide for payment against documents at the American end, the purchaser opens a commercial bank credit against which the seller collects upon his surrendering the endorsed original signed copies of the documents, including the insurance certificates, unless the purchaser has insured.

If the terms provide for payment at the foreign end, and the credit standing of the seller and purchaser are satisfactory, the shipper's bank will discount the draft, with all documents attached, and thus make available immediately a goodly part of the amount, the balance to be paid when the bank receives

notice from the foreign correspondent that the draft has been honored.

### Financing Direct Consignments

If the shipper intends to do a consignment business direct with the United Kingdom for instance, without using any of the established export services, he has to pay the freights. The trans-Atlantic steamship lines are accustomed to collect the ocean freight at British destinations, if the receivers have a satisfactory credit rating. Otherwise, the freight has to be prepaid by the shipper, or if his standing is satisfactory to the lines, they will accept his written guarantee that the freight will be paid.

The inland freight has to be paid always at the American port, although prior to the World War, the trans-Atlantic lines to the United Kingdom were accustomed to carry these charges also for collection in the United Kingdom.

On consignment shipments to the United Kingdom through the Panama Canal, all freights have to be prepaid. If the shipper's credit is regarded as satisfactory, and he happens not to reside in the port nor has any one there to represent him, the lines are accustomed to draw on him with the documents.

When freights and incidental costs have been paid, how is the shipper to secure reimbursement, when so long a time is required to secure the returns. He has recourse to two methods of covering the charges:

By sight draft upon the receiver with documents attached

By collecting against a commercial bank credit opened in his favor by the receiver for payment of freights

If the shipper's business in the port is being handled by a forwarding agent, then the agent can attend to paying the freights on consignments and draw on the receiver, who deducts the charges when rendering account of sales.

Under head of the British markets, reference was made to the practice of some receivers in making advances to American shippers. Many shippers resort to this source as a means of financing their costs, or a part thereof, in addition to the freights, until the goods can be sold. However, as pointed out previously, this practice is not believed to be in the best interests of the industry, as was explained in treating the British markets. In addition to the reasons given, when once the shipper has received the advance, he is powerless to divert the shipment, and in case the receiver operates only in the port of destination, the shipper is powerless to distribute in case the port market should not prove to be satisfactory.

#### SUGGESTIONS FOR THE INDIVIDUAL

If the student is a grower who desires to export his products, unless he is a very large producer, being in a position to keep regular supplies in the markets as conditions justify, and he has no organization at hand to absorb his output in price pools, the best possible advice is to keep away from the foreign markets, or otherwise get together with his neighboring growers and form a marketing organization with efficient management, and provide for the pooling of sales and returns in order to enjoy the insurance of the general averages.

If a grower, or his organization, or a shipper, decides to engage in exporting, it is best, as a general rule, to use the services of a capable export fruit distributing agent, after carefully investigating the available mediums. Bearing in mind the prevailing methods in the United Kingdom and

Europe, our largest foreign markets, care should be exercised to select a service that can give you a strong central management in those markets along the lines of modern distributing and merchandising methods of marketing.

If the student desires to engage in general export trade as a primary business, or to serve as export sales manager for some distributing organization, the following suggestions are made:

1. Know your commodity. Know it under all the varying conditions. Know its harvesting and packing and shipping. Serve apprenticeships in some of the principal producing sections East and West

2. Learn to know the domestic trade to which the export is more or less incidental

3. Serve an apprenticeship in the export business, and absorb all the information possible, as to traffic, financing and trading methods

4. With the background of the above experience, learn to know the foreign markets, not from hearsay, but from actual contact. Study their tariff schedules, and their crop pest laws, and other regulations affecting imports. Study their customs, methods, and requirements. For this purpose serve an apprenticeship, if possible, in the chief foreign markets, or utilize the services of the United States Department of State, Commerce, and Agriculture.

5. Make proper marketing connections abroad

6. Secure sufficient financial backing

7. Do a clean business, whatever the kind of business some of your competitors may do

When you have done these things, if you have sound judgment and diligence, you might some day be a successful exporter, or an efficient export manager for some distributing organization.

More detailed information relating to successful steps in the exporting of these products is supplemented at the close of Lesson 16.

**QUESTIONS FOR FRUITS AND VEGETABLES LESSON 15**

As soon as you have mastered this lesson, answer these questions and submit your answers to The American Institute of Agriculture, Chicago, Ill., for grading or correction.

Do not fail to write your name, address, and matriculation number plainly on each set of answers you send. Be sure to give the number or letter of the lesson, and the number of each question answered. Write the question in full before writing the answer. Be brief and explicit. Confine your answer to the length indicated, if possible. Use a typewriter, if you have one.

Answer all questions. If any are omitted, the omission will count against you.

- I. Identify the areas which produce the bulk of fruit exported by this country.
- II. Name the chief foreign markets for American fruits.
- III. Name the 12 varieties of apples commonly exported and give the chief source of production of each.
- IV.
  - a. What is the standard pack for the eastern orchards?
  - b. What size of apples is preferred by the British people?
- V.
  - a. What variety of oranges is best suited for the British trade? Why?
  - b. Which variety of peach has been most successfully introduced abroad?
- VI.
  - a. How are consignments of fruit made to foreign commission agents?
  - b. What special railroad billing is required on export shipments?
- VII. Name the important steps which have to be taken at the American end in order to handle export trade successfully?
- VIII. How are exports of fruit financed?
- IX. State briefly the suggestions given by the author as essential for one desirous of engaging in the export trade as a business.
- X. Explain the meaning of the following terms, as used in this lesson: manifesting, c.i.f., direct consignments, inland freight.









# Outlets for Fruits and Vegetables in Latin America and Australasia

By CLARENCE W. MOOMAW



MARKETING FRUITS AND VEGETABLES

LESSON 16

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**HOW TO STUDY THIS LESSON**

This assignment may exhibit many earmarks of a study in geography. Nevertheless, it is well to have available, knowledge of this character if one is to intelligently consign fruit and vegetable products in export trade.

It was only a few years ago that the American stockman was aroused to the importance of the South American market as an outlet for pure bred live stock. It is clearly within the realm of possibility that owing to climatic conditions and characteristics peculiar to soil areas in this country, a very extensive market for American fruit and vegetable products will develop.

Study carefully the statements made relative to foreign trade in potatoes and onions, remembering that these two products particularly are one year products and that their distribution must be made within comparatively definite periods.

It is interesting to note that the several fruit and vegetable products that are consigned to the foreign trade must be graded, packed, and handled in a characteristic manner. In order to consign to outlets of this character, it is necessary for the consignor to meet the conditions peculiar to the various districts.

The author is very specific in his recommendations as to just what methods are necessary to adopt in order to deal with the South American trade. Remember that these markets are not consignment markets.

Study carefully the subject matter appearing under the heading "Recommendations for Developing Foreign Trade." The information is condensed for ready reference of the student. A complete grasp of this knowledge will be invaluable to the student who is anxious to obtain information relating to export foreign trade.

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## OUTLETS FOR FRUITS AND VEGETABLES IN LATIN AMERICA AND AUSTRALASIA

BY CLARENCE W. MOOMAW\*

By Latin America is meant all those countries and islands to the south of the United States, including West Indies, Central America, and South America. It is to be remembered that Mexico is not treated under the subject, because it is primarily an overland market, being handled similar to our own domestic markets.

Nor do we treat of the West Indian markets, as the demand for fruits and vegetables in that territory is very much like that of Central America, with the exception of our trade in potatoes and onions. Cuba is our largest foreign market for potatoes and is the third in importance for onions, Mexico being first and Canada second. The balance of the West Indian group also take relatively substantial quantities of both.

### CENTRAL AMERICAN MARKETS

Central America, with a population of over 8,000,000 people, is composed largely of Indians with an admixture of negroes. With the exception of the Canal Zone, the situation there is very much like that of the West Indies. Tropical and sub-tropical fruits are plentiful practically the year round.

The Central American countries considered in the lesson are: Panama, Costa Rica, Nicaragua, Honduras, Salvador, and Guatemala. As a market for American fruit and produce, Panama greatly exceeds all the others combined, though having the smallest

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\*Successful producer and exporter of fruits and vegetables; for complete statement of his experience, see Lesson 15.

population. This is due to the demands of the busy Canal Zone under American control and management, and to the large trade with passing ships.

### AMERICA'S EXPORT FRUIT TRADE

Outside of Panama, the countries mentioned import only small quantities of American fruits, although their combined population represents about 91% of all the countries under consideration. The opportunities for expansion are very limited indeed, because, excepting in the few ports and capitol cities, where there is a limited Caucasian and well-to-do native element, the population cannot be regarded even as possible consumers of imported fruits.

The trade with Panama since 1913 has fallen off sharply in all but pears, oranges, and lemons. The reduction is due to the fact that in 1913, the Canal was being pushed vigorously to completion, with a very large force of American workers. Since its completion, the force has been decreased gradually to just what is necessary for operation of the Canal and the Zone railway. However, a large portion of the trade at the present time is with passing ships, and this is growing. Table I shows the extent of our trade in fruits:

Table I. AMERICAN EXPORTS OF FRUITS TO CENTRAL AMERICA - 1913 and 1920

<u>Importing : Apples (bbls.)* : Pears (dollars)</u>				
Regions :	1913 :	1920 :	1913 :	1920
Panama	: 12,374 :	7,701 :	\$7,528 :	\$10,608
All others:	3,830 :	4,066 :	1,075 :	3,003
Total :	16,204 :	11,767 :	\$8,103 :	\$13,611
<u>Importing : Oranges (bxes.) : Lemons (bxes.)</u>				
Regions :	1913 :	1920 :	1913 :	1920
Panama	: 1,145 :	6,077 :	1,234 :	2,333
All others:	69 :	69 :	1 :	
Total :	1,214 :	6,128 :	1,235 :	2,333

\*Includes boxed apples, 3 boxes counted to the barrel



Varieties, Grades, and Sizes Demanded

In apples, the red varieties are demanded almost entirely. Virginia Yorks, Bens and Winesaps, New York and Maine Baldwins, and the standard box red varieties of the Pacific Coast. In barrels, the first grades, or best quality is preferred, and in boxes, all standard grades. The sizes are medium to large.

In pears, many varieties of fair to best quality enter into this trade, including Eastern barreled and Western boxed goods, such as Bartletts, Anjous, Nelis, Comice, Bosc, Clairgeau, and Keiffer. The preferred sizes are medium to large. The grades, barrels, No. 1, or "A" grade, and for boxes, the standard Pacific Coast grades.

In citrus fruit, the trade is largely in California Valencia oranges for the spring, summer, and autumn trade, which is the Cuban and Florida bare period. Good quality is wanted, with medium to large sizes.

In addition to the above fruits, there is a trade with Panama in plums and grapes, also California peaches and cherries.

AMERICA'S EXPORT VEGETABLE TRADE

The imports of potatoes and onions far exceed the imports of fruits. But Panama imports very far in excess of all other countries combined, due to the large American element and to the ship-trade in the Canal Zone.

Table II shows the state of our trade in 1913 and 1920:

TABLE II. AMERICAN EXPORTS OF POTATOES AND ONIONS  
TO CENTRAL AMERICA, 1913 AND 1920

Importing Regions		Potatoes (bushels)		Onions (bushels)				
	:	1913	:	1920	:	1913	:	1920
Panama	:	169,837	:	77,247	:	58,300	:	41,003
All others:	:	36,945	:	25,008	:	12,175	:	9,856
	:		:		:		:	
TOTAL	:	206,782	:	102,235	:	70,475	:	50,859

It will be noted as in the case of fruits, that the vegetable trade mark shows a marked decline in 1920, due to the reasons given for the decline in fruits. Outside of Panama the bulk of the trade is with Guatemala, Honduras, and Nicaragua.

The demand lasts the year round as long as an American supply is available, and practically all varieties of the best grades are wanted according to the season. The standard potato barrel and Navy onion crate are used mostly, the barrel being well ventilated.

In the Canal Zone, aside from potatoes and onions, the American population demand other kinds of vegetables such as celery, beans, lettuce, radishes, sweet potatoes, and so on, as can be delivered in good condition. Many of these can be carried successfully, if properly selected and carefully handled under refrigeration, with the exception of the sweet potato, which if kiln dried, carries satisfactorily in ordinary space.

#### METHODS OF MARKETING

The trade with the Canal Zone is almost entirely monopolized by the Panama Steamship and Railway Company, through its commissaries. The purchases are made through the New York office, for shipment largely from New York and New Orleans.

Outside of Panama, with the exception of Guatemala, the trade has been developed along with the American banana industry and is almost entirely incidental thereto, the supplies being purchased by the United Fruit Company for shipment from New York or New Orleans, and for sale and distribution by the Company's commissaries in the several countries. The company also handles some trade in a similar way in Panama. The trade with Guatemala is handled through general trading houses.

THE SOUTH AMERICAN MARKETS

Though for extent of territory and total population, South America is not of great importance as markets for American fruit at the present time, (1923), it is believed that there are rather great potential possibilities for deciduous fruits, and possibly potatoes and onions from the United States, in some of the South American countries. Particularly is this believed to be true for Argentina, Brazil, and Uruguay, which, owing to their great plains or table lands and natural resources in ports and raw materials, are capable of great expansion and great increases in population.

For many years, the larger South American countries have held out great allurements to foreigners, both of the better and poorer types. The population has been steadily on the increase, and the economic future, as is believed, will attract a substantial increase in immigration from Europe.

For a number of years the United States has carried on a steady export trade in fruits with the larger South American countries, mostly Argentina and Brazil. This trade has been confined largely to apples and pears, with some plums and occasional small shipments of California peaches, grapes, and oranges.

In addition to the fruit trade, there has been trade of some years standing in Irish potatoes and onions, primarily in the tropical regions, and during the World War, for several seasons, there was very great activity in this trade with all South American countries because they could not secure their usual foreign supply from Europe. However, considering the fact that the temperate regions of South America grow potatoes and onions, and that, like in the United States, the domestic product can be so produced and handled as to be available nearly the year round, it is not probable that the potato

trade will reach very substantial proportions, excepting in the tropical countries.

### Trading Heretofore Handicapped

In referring to the trade of the past being relatively unimportant, it is of interest to know that the fruit trade, as well as the vegetable trade in part, has been very greatly handicapped until recent times by lack of proper fast steamer services, and also by the control of a relatively few American exporters by virtue of having first call upon the limited refrigerator facilities, as well as to a disposition on the part of both exporters and importers to get as high prices as possible from the trade. In consequence, the cost of the goods in South America has been notoriously high. However, the improvement in services out of New York, and the recent establishment of a refrigerator steamer line from the Pacific Coast through the Canal to the South American west coast, are expected to remove many of the trade obstructions.

### TRADE DEVELOPMENT IN BRAZIL

A very large portion of Brazil is inaccessible and unavailable for the importation of fruit and vegetables, and very many years will pass before American fruits can find markets even indirectly at any great distance from the seaboard.

The section of Brazil which is of importance to American exporters extends from the mouth of the Amazon about 3,000 miles down the coast to the Uruguayan border. This section with its interior regions represents only about three-eighths of Brazil but embraces all the ports of call, excepting two, with a goodly number of smaller seacoast cities which are reached by coastal services from the principal ports. Of this region the most important, of course, is the state of Rio de Janeiro.

North of the state of Rio de Janeiro to the Amazon there are only two important ports of call for ocean steamers, namely, Bahia and Pernambuco, yet this region has a population, coastal and interior, amounting to about 8,500,000. With the exception of the merchant and limited official class in the few small cities, the population is almost exclusively native, with a considerable admixture of negroes engaged in agricultural and forestry pursuits.

### Rio de Janeiro, an Import Center

Naturally the import trade of this region is very limited, being confined to Bahia, Pernambuco, Ceara, and Maranhao. The first two cities, though receiving foreign fruits direct, depend considerably upon importers of Rio de Janeiro for supplies, and Pernambuco is not a port of call for American fruit carrying steamers.

There are good storage facilities at Rio de Janeiro, and at the important port of Santos, to take care of imported fruit supplies between the arrivals of foreign steamers, thus enabling the importers to keep the markets regularly supplied.

In the south, are the three important agricultural states of Parana, Santa Catharina, and Rio Grande de Sul, with a combined population of about 3,000,000. These states are traversed by the main line railway from Rio de Janeiro to Montevideo. However, their import fruit supply comes largely through their several seaports from the importers of Rio de Janeiro. These ports are not reached by refrigerator steamers from abroad.

The other five-eighths of Brazil, including the region of the Amazon and its tributaries, is unimportant for foreign fruit consumption excepting Para, with about 250,000 inhabitants, and Manaus, a port 1,000 miles up the Amazon with about 80,000

inhabitants. There is practically no distribution of imported fruits from these two cities with the exception of Para, which does a small coastal trade. There is a large native or negro population in these two cities and the consumption of imported fruits is limited largely to the merchant and official classes, the cost being out of the native's reach, his tastes running to the varied kinds of tropical fruits which can be had almost for the asking.

However, of direct imports of foreign fruits by the 11 Brazilian ports, Para stands about third and Manaus about fifth in importance.

### The Production of Fruits in Brazil

The production of fruits, also vegetables, has never been reported statistically, which in a way signifies that as an industry it is relatively unimportant. Agriculture turns its attention to coffee, sugar cane, rubber, cotton, tobacco, and the like.

With the exception of the extreme south, the country is tropical, and many tropical fruits abound, but not largely in a cultivated way. The place of the vegetable which does not flourish in tropical regions is supplied largely by the banana and plantain, in so far as the great majority of the population is concerned. From Sao Paulo south, temperate fruits grow in the mountainous regions, but only in the state of Rio Grande do Sul do deciduous fruits, excepting grapes and quinces, attain commercial importance. Grapes, largely of the Concord and Niagara varieties, are grown in Sao Paulo for the wine industries. Wild quinces abound in Sao Paulo and also in some higher elevations of Rio de Janeiro, being used extensively for canning purposes on a large commercial scale.

### Deciduous Fruits Used Largely for Canning

In Rio Grande do Sul, apples, pears, peaches, quinces, grapes and other deciduous fruits are grown

in a fairly large commercial way, but the horticultural and handling methods are extremely crude. The fruit is defective and unattractive, the bulk being used for cooking, wine making, and canning purposes, there being many canneries in this state.

Of the tropical and sub-tropical fruits, while these, of course, grow wild in most of Brazil, commercial production has not attained great importance. Of these, the banana, pineapple, citrus fruits, mangoes, and abacates predominate. Of primary interest to Americans are the citrus fruits. The celebrated Washington Navel, now grown so extensively in California, originated wild in the country about Bahia. It is now cultivated there with groves aggregating 75,000 to 100,000 trees. A more common orange, not dissimilar to the Florida type, grows generally with cultivated groves here and there in various parts of the country. The tangerine also is grown. Lemons and limes are produced, but the grapefruit is rarely ever seen and little known. It is also unpopular, because it is highly acid. Brazilians do not like very acid fruits. The lemon is not used in America. It is not picked until fully ripe and sweet, and is eaten as one eats an orange.

### Orange Exports Increasing

Oranges are relatively plentiful and very cheap in the markets of Brazil throughout the year, and considerable quantities are exported. The industry in Sao Paulo is reaching considerable commercial importance with increased production. The opportunities for American oranges, of course, are very limited. Their superior quality and attractiveness as compared with the crudely handled Brazilian product, mostly of common varieties, would possibly find an opening now and then in the fancy fruit trade of the largest cities.

### THE BRAZILIAN IMPORT FRUIT TRADE

Brazil imports quite a variety of fruits, and from many far countries as well as other South American regions. However, the tariff has been very high, a decided handicap in expanding the trade. The United States predominates in apples, pears, and plums, with Canada second in apples, which also come from Portugal and New Zealand. Overseas grapes come largely from Portugal and Spain, with some Californians.

The requirements of the trade, as to varieties, grades, sizes, and so on, are given below:

Apples - Standard boxes, primarily Winesaps, Newtons, Gravensteins, Jonathans, King Davids, Stayman's Spitzenbergs, Delicious, and Roman Beauties; the boxed Winesaps and Newtons, and the barreled, Ben Davis from Virginia. As a matter of fact, the barrel trade is largely limited to Ben Davis. In boxes they demand both extra fancies, and fancies, and in barrels they require good grade No. 1s, with fancy color.

Pears - The American pear holds a relatively strong position in this trade, and owing to its better grading, packing, and keeping qualities, has practically pushed all other foreign pears out of the market. The pear trade is limited to the box pack because it is found to arrive in better condition and showing better quality than barreled goods.

The California pear is most popular, but the Pacific Northwest states contribute substantially. Practically all varieties of pears grown on the Pacific Coast have been shipped to Brazil. However, for one reason or another, due either to quality or physical condition, many of the varieties are not very well suited to this trade. The earliest varieties would, no doubt, do very well because of



arriving when the market is more or less bare, but they do not arrive in good condition as a rule, owing to the long voyage.

Miscellaneous American Fruits - In very recent years there has been a small trade in peaches and plums, including the prune variety, and also grapes. These have all come from California. The peach has not been received with much favor, because of the lack of flavor. Still, the California peach is about the only one that will stand the voyage, with the possible exception of late Eastern clingstone varieties, which for appearance and quality are not suited to this trade.

The Kelsey plum meets with a good reception, but the prune, though arriving in fairly good condition and handling well after arrival, seems to lose flavor during the journey, and has not met with a very good reception.

The standard California crate is the package used in this trade.

Cherries are popular, and are received from Portugal, but heretofore the long journey through New York has been too much for the Pacific Coast product, and the Eastern cherry is too perishable.

The Emperor grape meets with a good reception in Brazil owing to its similarity to the European Almeria, which is very popular. However, the much higher delivered cost of the Emperor has been a serious handicap to the trade. The grapes are always shipped in the 100 pound drum and packed in redwood sawdust.

The new refrigerator route from the Pacific Coast should make possible the delivery of miscellaneous fruits in good condition and at lower costs. It is expected that in consequence a considerable direct trade will be built up, because the superior quality of the Pacific Coast products will meet with

a ready demand against European product, all other conditions being more or less equal.

### TRADE DEVELOPMENT IN THE RIVER PLATE COUNTRIES

Argentina, Uruguay, and Paraguay, commonly called in commercial circles the River Plate countries, are very large agricultural and stock raising regions. Direct trading with this region will be limited for some time to come to the seaports of Buenos Aires and Montevideo, unless, of course, large American fruit distributing organizations should establish branches in these two cities and from there trade with the inland cities, which may be possible with the growth of the trade, following the gradual growth of refrigerator facilities from the Atlantic and Pacific Coasts of the United States.

### The Fruit Industry Gaining in Importance

Argentina, combining as it does climatic conditions so similar to the United States, would seem to offer opportunities for growing deciduous and citrus fruits very successfully in practically all parts of the country. However, soil conditions as well as other things, such as elevation, are just as important as proper climate, and Argentina has many handicaps, though the fruit industry is gradually developing in spite of them, many kinds of fruits being grown, such as apples, pears, peaches, quinces, plums, grapes, berries, and citrus fruits.

The fruit, as well as the vegetable industry, is largely accessory to the large cities and towns, occasionally, however, appearing in a few distant parts of the country where especially good conditions exist for production.

Unlike Brazil, Argentina and Uruguay are rather up-to-date in methods of cultivation and treatment of trees, and grow a much higher quality of fruit.

Owing to Italian and French influence, the varieties run considerably to continental kinds, and in many districts, the individual orchards, and especially the vineyards, run into large acreages. However, in the principal fruit sections, which as stated have been developed within or near the seaboard regions, the apple does not thrive very well and its quality suits it best for cooking purposes. Possibly some day with the development of the good fruit regions in the southern foothills of the Andes, the Argentine apply industry may come into its own.

### Production Plentiful

The production of fruits is bountiful generally, and in some lines is not always profitable when the crops are large. In the three countries, the orange is one of the leading fruits in point of acreage and production, with large commercial groves, the supply being sufficient, although some are imported from Brazil. The more acid citrus fruits occupy a different position from that in Brazil, both lemons and limes being very popular in the way they are used in the United States. However, the production is not large. Commercial grape fruit groves have been developed in a small way near Buenos Aires, largely for foreign consumers of that city.

The peach industry is one of the largest in the River Plate countries. Pears are not grown so extensively and the best varieties demand high prices. The grape is very largely grown for the great wine industry, as well as for table use. In these countries, as in Brazil, the quince is very bountiful, being used for canning and preserving. Plums and prunes thrive well and are grown extensively for the fresh fruit markets, with considerable quantities being canned and dried for winter use. Nectarines, apricots, and cherries are also grown extensively. The pineapple is grown in Paraguay alone, sufficient for its own needs.

The seasons of the various home grown fruits are:

Oranges	April to December with some Valencias in later winter and March
Apples	February and March, con- tinuing in November from cold storage
Pears	Late January to April 1, including at the end of the season limited quan- tities from cold storage
Plums and Prunes	December to March
Peaches and Grapes	December 15 to March 15
Nectarines	January and February
Apricots and Cherries	November and December
Grapefruit	June to November
Lemons	July to November
Bananas	The year round, heaviest in the summer
Pineapples	November to January

### Methods of Handling

The method of handling and marketing native fruits is very similar to that of Brazil, although the physical handling is somewhat better, the excellent wicker basket being used largely as the container. The growers generally sell the crops in bulk to jobbers from the cities, a method which used to be in vogue largely in the United States, and still is in some sections. Organized methods are unknown. The fruits find their way to central market houses or large fruit stores, whereas the imported brands are sold mostly in the groceries which cater to the better or richer classes. Cold storage facilities are ample in the big cities and this is very important to the import trade as a means of conserving the supply between the arrivals of steamers.

### The Import Fruit Trade

For many years imports of fruits have been received at Buenos Aires and Montevideo from European

countries, and even after the United States entered the trade some years ago, American and Canadian apples were received via Southampton, England, as re-exports from the United Kingdom.

The American apple and pear predominates, but apples come also from Canada, Portugal, and New Zealand, in addition to the re-exports from England. Large quantities of oranges come from Brazil, and considerable quantities from Europe, with Italian lemons; grapes from Portugal and Spain predominate. Stone fruits, such as peaches, cherries, and apricots have been received for some years from Portugal. America has made little effort to participate in this trade, no doubt due to the long voyage and the difficulty of getting the steamers to open their refrigerator compartments for the small quantities that would be necessary in the beginning.

Practically speaking, our trade with the River Plate region has been confined to apples and pears, largely at Buenos Aires. The trade in these two products has shown a consistent increase during the past 15 years. Paraguay of course, receives no direct imports.

The requirements of the River Plate trade as to varieties, grades, sizes, and so on, are very much like that of Brazil.

### Popular Varieties of Apples

The Virginia barreled apple has vied with the boxed product in this trade, but the majority is boxed fruit, owing to the uniformity and reliability of the pack. The bulk of the barreled apples are Virginia and Ben Davis. Other barreled varieties like the Baldwins and York Imperial arrive in good condition and are recognized as having superior quality, but they do not handle so well after arrival.

The Virginia Winesap has been received and is well liked, but the boxed Winesap from the Pacific Coast holds the attention of the trade for this variety.

Unlike Brazil, the Newtown or any apple without color is not wanted. Always good red color is demanded. The Delicious is far more popular here than in Brazil, and the Rome has good standing.

There are also some differences as to pears. While the Anjou is popular, the Winter Nelis is rarely imported. Pears of fancy appearance, such as the Bosc, Onondaga, and Flemish Beauty are well liked, although not very good shippers.

In oranges, the California Navel, of best quality and large sizes, are best suited for this trade.

In other fruits, the Emperor grape, the Kelsey plum, the California Elberta peach, the hardy kinds of Pacific Coast red cherries, and the California apricot, as well as the prune - all of goodly size - packed in the approved Western manner, are suited to this trade.

### OTHER SOUTH AMERICAN COUNTRIES

Although the population of Peru is estimated to be somewhat larger than that of Chile, it is not so compact, and the markets are of considerably less importance. The principal markets in Peru are the seaport Callao, and Lima, a short distance inland, with a combined population of about 200,000. Another seaport, Mollendo, with a few thousand population, connects with the industrial city of Arequipa, a few hours inland. In view of the limited accessible markets and the fact that only a very small percentage of the country's population is white, the possibilities for trade development are somewhat small.

### Fruit Production in Chile

In fruit growing conditions, Chile may be called the California of South America, including in the Southern regions many characteristics of the Pacific Northwest, capable of producing practically the same kinds from sub-tropical to temperate. Production is accomplished chiefly by irrigation.

Fruit growing is a very old industry, though the orchards are mostly small and the methods mostly crude. The grape industry is extremely large to supply the wineries. The other fruits are grown largely for canneries and driers, both of which are important industries. To be sure, Chile exports fresh fruits, some having reached the New York winter markets in recent years.

The most important deciduous fruits are apples, peaches, and pears. Home production supplies the home markets bountifully with all classes of temperate fruits and vegetables, during their season, and in some lines the home supply is augmented with imports from other South American countries and with apples from New Zealand.

The seasons are opposite those of America and very similar to Argentina and Uruguay, though, of course, oranges, which they largely import from Peru and Ecuador, are plentiful nearly all the year with the exception of February and March. The lemon is not extensively used and home production is sufficient. Limes are largely used but come mostly from Ecuador.

#### THE IMPORT FRUIT TRADE OF THE WEST AND NORTH COASTS

Owing to the abundance of fruits of domestic production, and the bountiful supply of tropical and sub-tropical fruits from Ecuador almost the year round, and also owing to the absence of great wealth and the large foreign element, noted in the case of cities of the East Coast, Chile and Peru do extremely little importing from overseas countries, and for present purposes at least, they might be eliminated from this lesson.

There are no commercial cold storages, either on the West Coast or North Coast, thus restricting greatly the possibility of conserving the supply of imported fruits between the arrivals of steamers as on the East Coast. Furthermore the trade mediums

are not as well developed with substantial houses specializing in perishable products, which is a trade in itself largely the world over. Especially the markets of the West Coast are a matter of development in practically all ways.

The negligible trade with the West Coast is especially noteworthy, but it may be said for it, that only until very recent years the West Coast has been inaccessible to the Atlantic Coast of the United States, from where all the South American fruit trade originated. And there have not been suitable services from the Pacific Coast. While the import trade of the West Coast with America amounts to nothing, it is not much better for other overseas countries. The requirements as to varieties, grades, and sizes are about the same as Brazil and Argentina.

#### Potato and Onion Trade

America's trade with South America in potatoes and onions is confined largely to the tropical and semi-tropical regions where these products cannot be grown. Both products are produced in the temperate regions of South America during the opposite of the American season.

Table III. shows the pre-war and post-war state of the potato and onion trade:

TABLE III. AMERICA'S EXPORTS OF POTATOES AND ONIONS TO SOUTH AMERICA 1913 AND 1920

<u>Importing: Potatoes (bushels) : Onions (bushels)</u>							
<u>Countries:</u>	<u>1913</u>	<u>:</u>	<u>1920</u>	<u>:</u>	<u>1913</u>	<u>:</u>	<u>1920</u>
Columbia :	13,544	:	3,184	:	2,569	:	1,143
Venezuela:	12,825	:	18,456	:	2	:	3
Guiana :	11,438	:	26,507	:	164	:	121
Brazil :	236	:	7,071	:		:	119
Uruguay :		:	500	:		:	
Argentina:		:	1,108	:		:	
Chile :	7,709	:		:	1,396	:	33
Peru :	512	:		:	99	:	113
Equador :	67	:		:	196	:	3
Totals :	46,331	:	56,826	:	4,426	:	1,535



Despite the economic conditions existing in South America after the war, the potato trade showed an increase over 1913, almost entirely, however, on the North Coast. The onion trade is negligible, due somewhat to this product being more perishable, not being able to stand handling, excepting in cool space, which is costly and not always available. As previously stated, the East Coast normally imports heavily from Europe.

War conditions interrupted the European trade temporarily, and for several years there was quite a boom in the American potato particularly, with a belief on the part of some that the trade, once established, would grow. You will note that in 1913 the exports to South America as a whole were only 46,331 bushels. Beginning about September, 1914, one month or more after the outbreak of the World War, until August, 1915, the exports of American potatoes to South America were over 450,000 bushels, and a strong demand continued until the period of extreme high prices in America and the later South American industrial collapse. The great bulk of the trade was with Brazil and the River Plate countries, and included both cooking and seeding kinds.

For the South American trade, owing to the season of the temperate regions being opposite that of the United States, the heaviest demand for cookers begins about the first of August, with shipments made from New York during July, and lasts until the South American crop begins to come into the market about December to January.

#### Varieties and Sizes Desired

The varieties of potatoes which have been mostly used in this trade are Early Rose, Early Ohio, and Green Mountain. The medium sizes are demanded, with the larger range for the Coast markets and smaller for the inland trade. The orders always specify the sizes and it, therefore, is necessary to screen the

potatoes, packing separately the larger and smaller sizes.

The yellow onion of medium sizes is preferred, though some reds are shipped.

Owing to the fact that the potatoes undergo a long voyage through the tropics, and since it is not practicable to refrigerate them, extreme care has to be exercised in the selection, grading, and packing of the stock to assure arrival in good condition. Development of "black heart" and "soft rot" during the voyage must be guarded against.

A special crate has been devised to give the potatoes the best possible ventilation, and the potatoes were stowed cool in the meat boxes which are heavily insulated, the boxes being closed throughout the voyage, thus protecting the product from the intense tropical heat. With these precautions, the potatoes usually arrive in good condition. However, the barrel, with ample holes cut in heads and staves, has been used with fair success, but this package cannot be compared with the special crate, and the latter is exceptionally well suited to onions as well as to potatoes.

### HOW TO TRADE WITH SOUTH AMERICA

From the viewpoint of the American exporter, the method of trading with South American countries is practically the same for all the countries.

The countries of South America are not consignment markets, by which is meant that it is not the practice of South Americans to receive shipments from abroad to be sold for shippers account. The import trade is opposed to this method. They prefer to place firm orders abroad for their own account, and thus the supplies are fairly regulated to meet the requirements.

There is another reason why the importers are opposed to consignments, namely: the margins of profit have always been notoriously high, and an open consignment trade would certainly put an end to these high margins. Several attempts of large American distributing organizations to open up the markets in a large way by sending substantial supplies of apples for storage and sale on the spot were severely boycotted by the importers, and it is indeed very difficult to secure intensive marketing for this reason.

While it is possible for the American exporter to deal direct, however, the size of individual orders frequently being less than car lots, and the distance being such as to make necessary the expensive use of cables in quoting and confirming orders, direct trading is not practicable at the present stage of the trade.

### Trading Through Middlemen

An intermediary, through whom to work in each important port, is necessary to trading on a substantial scale. Excellent intermediaries are to be found in the form of commission agents, or import brokers, as we would call them in America. These firms deal in many commodities, and have a rather large clientele whom they visit regularly in the interests of their foreign patrons. They usually work for a small commission, in proportion to the importance and price of the commodity.

On receiving quotations from their American principals, the commission agents make offerings to their clientele, securing and cabling collective orders for shipments on specific steamers. The exporter marks the goods accordingly and ships to each importer under separate bills of lading, made to shippers order. The documents are thus negotiable. The exporter insures the goods to cover the delivered cost plus the usual 10%, prepays the freight, draws

at sight, or rarely on trade acceptance terms, at the c.i.f. price at which the order was booked, attaching to the draft the endorsed signed ocean documents and insurance certificates in duplicate, the latter being required by the banks as their protection in discounting the draft.

An exporter new to that field meets with great difficulty in forming connections with desirable commission agents, because the best of them, in most cases, already have connections with whom it is supposed they are satisfied. If they are fairly well satisfied, it requires very considerable inducement to get them to make a change or even to take on a new account in the same line.

It is important to know the agent's connections as to the importers, because it is to be remembered that the agent is in no way responsible for accounts, and if the importer is not morally and financially responsible, the exporter may incur heavy losses through rejections, adjustments, and/or defaults.

### Reduced Prices Necessary for Increasing Trade

Looking to the development of the markets in an intensive way, it is necessary first to secure, if possible, a reduction in the price, which heretofore has been prohibitive to all but the well-to-do. Extremely high profits at both ends have been the rule. Considerable missionary work at the South American end will be necessary on the part of American organizations, to be followed possibly by establishing agencies for direct trading, keeping a constant supply on hand.

### THE OUTLOOK FOR THE SOUTH AMERICAN TRADE

Some are inclined to the belief that the future possibilities for fruit, such as apples, pears, plums, grapes, and probably peaches of the hardier kinds are very considerable indeed, with more distant possibilities for citrus fruits.

Possibilities for Future Trade Development

These optimists base their belief on the facts:

That the great countries of the West Coast are yet to be intensively developed and populated

That the economic conditions resulting in Europe from the World War will stimulate migration to these South American countries where virgin opportunities await them in stock raising, and agricultural and forestry pursuits

That the population will greatly increase in the next quarter century

That ocean and inland communication will greatly improve with lower costs of transportation

That manufacture, for which conditions at present are not favorable, may develop appreciably

That their exports will greatly increase to all ports of the world

That the fruit seasons mainly being opposite the fruit seasons of the United States, which geographically is most accessible for trading.

In view of all these things, South America in the course of its development naturally will require increasingly large quantities of our products from year to year, eventually becoming very substantial markets, and the exporter who has vision, and judgment, and resource, who starts on the ground floor, has a good future before him in this trade.

This applies in particular to large distributing organizations who are truly interested in the development of potential markets, where many years will be required for very substantial development.

AUSTRALIA AND NEW ZEALAND

Australia and New Zealand are very large fruit producing countries. The value of their total production now amounts to about \$18,000,000 annually, ranking about third among the important commercial deciduous fruit regions of the world. However, owing to their fruit season, with the exception of

oranges, being opposite the American season, exporters of the Pacific Coast have found a market there for considerable quantities of fruits, and also onions, with occasional shipments of potatoes.

Indeed, Australia and New Zealand are large fruit exporting countries, and the great bulk of this trade is with the United Kingdom, half way round the world, which is a most splendid indication of their admirable enterprise.

### AUSTRALIAN RESOURCES

Though a vast country about equal in size to the United States, a considerable part of the continent is desert, and the population, only about 5,000,000, is distributed along the verdant coastal regions, largely east, south and west, with the great majority in the southeast. The chief industries are agriculture, horticulture, stock raising, and allied industries.

Horticulturally, the producing regions are located proportionately to the distribution of the population. Temperate fruits of all kinds, of which the apple greatly predominates, are grown largely in the southeast, including the Island of Tasmania, and in western Australia. All classes of vegetables also are grown in these regions.

The orange industry, which is constantly growing in importance, is mainly in the states of New South Wales, Queensland, West Australia, and South Australia, in order of importance, the bulk being produced in New South Wales and Queensland. The orange industry is of especial interest because, with the substantial increase in production, the continent in recent years has been exporting oranges as far away as the United Kingdom, and is looking to that market as a substantial outlet. This means competition for American Valencias.

### Excellent Marketing Facilities

The marketing facilities in Australia are excellent. The domestic trade in the cities is handled in several ways, through auction, commission merchants, and municipally owned central markets. There is a large wholesale trade in which the dealers purchase direct from the growers or organizations, for distribution. Cold storage space has been sufficient to meet the requirements. The grading and packing of the fruit, has been far below the standard of the Pacific Coast, and this is greatly to the advantage of Americans. During the World War, for at least two years, the Australian industry was in great distress due to the interruption of shipping, but the resumption of services since the war has gradually restored the export trade.

### Australia's Import Trade

The import fresh fruit trade was very considerable before the World War, and the very great bulk was Fiji bananas, equivalent to about 30,000,000 pounds annually. American apples come next, with Italian lemons third, and American oranges fourth, with only several thousand boxes.

The crop pest and marking laws are explicit, affecting imports as well as domestic, and it is necessary for the American exporters to keep posted on these.

The interruption of shipping during the war and the other obstructions materially affected the import trade, entirely shutting off Italian lemons. Following the war, economic conditions and special restrictions in Australia made difficult the re-establishment of the trade substantially.

Apples - The apple imports, for a period of years came largely from America, but in recent years the British Columbia product has been having more of a hand, and it will be of increasingly great importance as a competitor. The apple trade has never been

large because of lack of adequate refrigerator facilities. In 1920, America exported only 11,298 boxes of apples to Australia as compared with 43,038 in 1913. The falling off was due mostly to the post-war economic conditions and to the increase in Australian production, with a still restricted export outlet forcing the holding of large quantities in storage for late markets, thus shortening the period for Americans.

More care has been exercised in the Australian apple trade than in the trade with the Far East as to the selection of varieties. Those who were instrumental in developing the trade, first made a very careful study of the requirements. The varieties most favored are standard Pacific Coast kinds, such as King David, Jonathan, McIntosh, Spitzenburg, Delicious, Yellow Newtown, and Winesap. Best quality is wanted and the preferred sizes are counts 150s to 225s. The fruit arrives in good condition if shipped fresh in refrigerators.

Pears - Pears are popular, but refrigerator space has been so limited that this fruit has given place to others. Furthermore, shipment so far has been regarded as risky. But it is believed if the hardier inter-mountain pears were exported to Australia under proper temperature, about 31 to 32 degrees, they would surely arrive in good condition, and it is believed well worth while when more space may be available. There are believed to be good opportunities for grapes and plums also.

Citrus Fruit - The citrus fruit trade with Australia has been spasmodic, largely oranges before the war, though at best the trade has been rather negligible. In 1920, the American exports to Australia were only 860 boxes of oranges and 1,630 boxes of lemons, as compared with 3,639 and 50 respectively in 1913. The development of the Australian orange industry in recent years does not leave much hope for Californians, excepting a few months from January until May.



Again, the lack of refrigerator facilities has greatly restricted this trade. If proper facilities could be secured, it is believed that a substantial trade would result in lemons, because such as are grown in Australia are inferior, though, of course, the Italians would compete all the year, more or less.

The medium sizes of oranges are required, and lemons, medium to fairly large.

Onions and Potatoes - As to vegetables, onions and potatoes have entered this trade, but the prospect for the latter is not believed to be encouraging, because Australian potatoes are in the markets practically the year 'round. With large crops and cheap prices in America, there is occasionally a trade in such years for the barest period in the Australian springtime.

The onion trade has been more substantial, but what the future of this trade is, cannot be predicted. The American potato exports to Australia in 1920 were none as compared with 5,917 bushels in 1913. The onion exports for the same years were 30,838 and 10,859 bushels respectively.

The medium sizes of best keeping varieties are preferred.

#### HOW TRADING IS CONDUCTED

The American trade with Australia has been controlled almost entirely by one concern in that country. This control has resulted from their being the pioneers and securing an option on practically all the refrigerator space on the two lines from the Pacific Coast. With connections on the Coast, they have been accustomed to buy their supplies f.o.b. American inland shipping points.

#### Sydney, the Trading Center

The trade centers at Sydney, because that is the terminus of the lines. Other cities around the coast

are supplied by transshipment, either rail or water routes. In Sydney, where the most of the imports are consumed, the sales are generally made either through auction or direct to retailers. Fruit merchants who have an out of town trade buy and distribute. Some of these have tried to import direct, but have failed because of the controlled refrigerator space, and so they must pay the importers usually high prices, which includes a very high profit for the importer.

The situation is a very great stringent as far as development of the trade is concerned. The only hope for the future is a considerable increase in refrigerator accommodations and an open market for the space, in order that any one, either the organizations of the Coast, or fruit merchants of Australia may engage in the trade to the limit of intensive marketing, controlled only by supply and demand. Under such conditions, and only under such conditions, will the trade grow as it should grow for our products.

### NEW ZEALAND

New Zealand, with a population of over 1,000,000, is very similar to Australia in pursuits, but the country being more temperate, does not produce such a great variety of fruits.

### Importations from America

The apple imports have come from the United States and Canada largely, and also some from Australia, though these compete more largely with New Zealand. The American apple exports to New Zealand in 1920 were only 4,206 boxes, as compared with 23,754 boxes in 1913. The citrus trade showed a distinct gain. In 1920, the American exports were: oranges, 27,381 boxes, and lemons, 12,306 boxes, as compared with 13,978 and 150 boxes respectively in 1913.

Some years there has been a considerable trade in onions, but the World War reduced the trade somewhat.

The quantity from America in 1920 was 17,841 bushels as compared with 54,662 in 1913.

Only negligible quantities of potatoes have ever been shipped, with little prospect apparently for the future.

### CONTROL OF THE NEW ZEALAND TRADE

The American trade with New Zealand is far more of an open door proposition than in Australia, and thus has more of the elements desirable for market development.

There are more than 20 New Zealand firms who have engaged in importing American and Canadian fruit and vegetables, but the bulk of the trade has been in the hands of a few, and it is reported that there is some cooperation among these few as to fixing prices.

The importers sell largely to the retailers, there being few wholesale houses, excepting in Auckland. This, of course, is an advantage because it eliminates one of the steps usually encountered in fruit distribution. The sales are made both privately and by auction.

### THE OUTLOOK IN AUSTRALASIA

As far as the present extent of importations of American fruit and vegetables is concerned, the trade does not look very promising. However, it is to be remembered that both countries are in their infancy. Enormous development is possible and inevitably will take place. The population is expected to grow, and no doubt these countries will attract substantial immigration from Europe and possibly America in the next 25 years. Though their fruit industries and their export trade will continue to grow, the opposite seasons for most fruits as compared with the American seasons, will always make a place for the American products which can be supplied in the off seasons.

### How to Handle the Australasian Trade

As long as the steamer refrigerator accommodations are so limited, the trade will drift along without any appreciable increase, and the high prices will keep the products in the luxury class. Therefore, the first essential is to secure the required facilities. It can be done only by establishing new steamship services or by inducing the present lines to increase their refrigerator capacity, the latter being entirely feasible. It would seem that this is a matter for cooperation among the selling agencies of the Pacific Coast.

Also, whenever increased shipping facilities may be secured, undoubtedly the best method to pursue in handling and developing the markets, is through cooperation of the various sections of the Pacific Coast fruit industry. It is believed that these markets in Australasia would be susceptible to publicity and rather intensive distribution. These activities would be best handled through cooperative means, especially by the various shippers of deciduous fruit. Special representation in Australasia for the shippers would be of value, but it would be wise, certainly in the beginning, to handle the market through Australasian importers, possibly selecting one good firm in each port market where the steamers call, and limiting their respective territories to the markets which are most accessible to their respective ports.

In the beginning, open consignments so regulated as to meet the current requirements would be of the greatest value in developing the markets. It is very important to keep a regular supply going at the proper seasons, and to see that the fruit sells reasonably cheap in order to stimulate consumption. To accomplish this, a certain amount of direction is required from the American end, and if the Pacific Coast industry does not take hold and do it in view of its basic interest in the matter, it can hardly be expected that others will do so.

RECOMMENDATIONS FOR DEVELOPING FOREIGN TRADE

Under the several divisions have been outlined the foreign conditions and methods and the individual steps required in exporting, with certain suggestions here and there as to the best methods for individual handling.

Now the question arises as to the best ways and means of approaching world markets, and of handling them in a satisfactory manner from the viewpoint of the industries as a whole.

This question is indeed a very important one, because here is the seat of production, here the seat of management, here the seat of need and desire to meet the growing demands of the industries for an increased foreign outlet.

Advocates of cooperation, whether of growers or shippers, have long talked of an organization to handle the export end of the business, that is, to serve as the medium through which to actually carry on the trade. However, very many believe that the business is too large to be handled by one organization, and that if the plan were feasible, it would be impossible for many years to secure sufficient support to make the plan truly effective.

If the latter viewpoint is correct, then what can the industries as a whole do to improve and standardize the business? It is undertaken to recommend below what is believed to be a workable plan:

1. The organization of a non-stock, non-profit export association under federal laws provided for such purposes, the membership to be limited to the suppliers, such as cooperative organizations and general shippers, the purpose being to attend to the large common foreign trade problems for the benefit of the industries as a whole

2. Secure through the organization the standardization of harvesting, grading, and packing for export

3. Careful supervision by the organization of the traffic at seaboard with inspections at port of shipments, observation in transit, and inspection at foreign destination, for the purpose of preventing the shipment of unsuitable fruit, and for the purpose of improving the methods of handling and stowage

4. Undertake through the organization to secure new steamer services or special steamer services, such as refrigerators, as may be required in any direction and at any season

5. Extend the organization abroad with sufficient representative Americans to serve as special agents in the principal markets as outposts of the industry

6. Send special investigators of the organization here and there to study new fields

7. The adoption by the organization of all-American export brands for all the products, to be used in connection with the brands of specific districts

8. Conduct through the organization American fruit and vegetable exhibits abroad

9. Conduct intensive advertising campaigns in both the old and newer markets, adjusted to meet the peculiar requirements of each country

10. Undertake to regulate in legal ways the export movement to such markets as the United Kingdom, in order to adjust the supply economically to meet the seasonal requirements, and to eliminate as far as possible the chaos which now exists in the movement of the export surplus

11. Provide in the organization a central bureau of information to assemble complete data not only from abroad, but also from its American members and exporters, as to what is going on in the business, issuing confidential reports regularly to the members

12. Let the organization call upon exporters to furnish regularly their market reports and advices to shippers in order that these may be checked up with market conditions, and used in the effort to regulate the movement

13. Call upon the members to furnish regularly statements of results secured through the various export services, in order that these results may be subjected at the end of the season to the acid test of comparison. Require the organization's special

agent in the United Kingdom, for instance, to report regularly the actual sales by specific receivers to see that no padding is done to cover up bad advices and services

14. Provide for the arbitration of difficulties between members and exporters, or exporters and foreign receivers

15. Finance the organization activities by an appropriate assessment upon the members, based more or less upon the total number of packages which each handles during the year, not upon the portion they may supply for export, thus placing the burden upon the industry as a whole

The above plan, or something similar thereto, is very much needed. It is not designed to interfere with export arrangements, but to handle some of the large common problems, and to secure the needed market development work abroad. The plan would not contemplate requiring the members to give up their export connections, but on the other hand would leave them to pursue the business in whatever manner they deem best.

In the opinion of those who have studied carefully the fruit and vegetable export trade, all too little attention has been paid to it by the American industries as a whole. The foreign demand has been left largely to assert itself, and foreign firms have been left, very largely indeed, to manage and finance the business - a dependency which is not believed to be for the best interests of the fruit industry.

#### Why Operations Abroad Have Not Been Extended

We may generally depend upon it that others will not attend to our business as we would attend to it ourselves, yet the American fruit industry, the largest and richest in the world, leaves largely to others the important task of handling the export end. Really, it is said that many of the largest distributing organizations of the United States, concerns who control the marketing of prodigious sup-

plies, have been without a consistent progressive foreign policy, yet their business organization and methods in the domestic markets have been developed to a high state of efficiency. Is it not a great wonder that they have not extended their operations abroad?

Several things have been responsible for this situation:

1. The very pressure of the ever increasing great crops have kept them busy with the greater American market

2. In many respects, the natural provincialism of the industries in the past with regard to things foreign

3. A considerable lack of first hand knowledge of foreign practices and conditions

4. Fruit politics, bitter rivalries, and the spending of large sums of money in securing their positions in the producing districts

5. The universal fear of undertaking individually substantial foreign ventures, because those who might not undertake such important ventures, might show in the beginning better results for their patrons at the end of the season

6. A very considerable lack of cooperation in the industries as a whole with regard to foreign trade

These are some of the things that have been responsible for the failure of the industries to participate actively and progressively in the foreign field, and to carry on the much needed market development work.

Apparently, upon the sales managers of the future will the matter largely depend, and if the student aspires to be one of them, let him carry with him the vision of service to his industry — the vision of working individually and cooperatively with other sales managers for the benefit of the industry as a whole, and not for the single benefit of himself or his own organization. Let him do this, and he will find that service under the larger vision will best bring the realization of the smaller vision.



### HOW FRUITS AND VEGETABLES ARE RETAILED

No other nation has the variety of fresh fruits and vegetables that is available to the American people. Likewise, the wide distribution of the areas suitable for producing specialized fruits and vegetable crops necessitates a complicated system of transportation and delivery.

Since products of this character are perishable, special facilities for storage and handling must be provided, all of which is expensive and hazardous.

The retailer must absorb a large percentage of this risk. The next lesson deals with the activities of the middleman and suggests ways and means for extending retail trade.

## GLOSSARY OF MARKETING TERMS USED IN THIS LESSON

abacates, n. A tropical fruit belonging to the banana family.

counts, n. As used in this lesson, a term stipulating the number of fruits of a given grade or size included in a standard box or package.

mangoes, n. A tropical fruit, similar to the apple. Like the apple grown in temperate zones, mangoes vary in shape, size, color, and flavor, being sometimes large, fleshy, and luscious, and at other times, small, tough and stringy.

nectarines, n. A variety of the peach, differing from the common variety mainly in its smooth, waxy skin and a firmer and more aromatic pulp.

port of call, A port where vessels are in the habit of putting in for supplies, repairs, information, and so on.

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**Note:** This is part of the Marketing Dictionary supplied with this course.

**QUESTIONS FOR FRUITS AND VEGETABLES LESSON 16**

As soon as you have mastered this lesson, answer these questions and submit your answers to The American Institute of Agriculture, Chicago, Ill., for grading or correction.

Do not fail to write your name, address, and matriculation number plainly on each set of answers you send. Be sure to give the number or letter of the lesson, and the number of each question answered. Write the question in full before writing the answer. Be brief and explicit. Confine your answer to the length indicated, if possible. Use a typewriter, if you have one.

Answer all questions. If any are omitted, the omission will count against you.

- I. What two South American countries absorb the greatest amount of export trade from the United States?
- II. What two factors have limited the export of fruits and vegetables to South American ports?
- III. What fruits are chiefly exported to Brazil?
- IV. State five of the factors that indicate the possibilities for developing an extensive trade with South American countries.
- V. Why does the export trade in fruits and vegetables for Australia center around Sydney?
- VI. What is the outlook for developing trade in fruits and vegetables in Australia?
- VII. Name eight of the suggestions offered by the author as supplying the best ways and means of approaching world markets and handling them in a satisfactory manner from the viewpoint of the industry as a whole.
- VIII. Why is it that the American fruit industry has not been extensively developed in foreign countries?
- IX. What factors are believed to be largely responsible for this situation?
- X. What plan is suggested for financing co-operative organizations interested in export trade?







# Retailing Fruits and Vegetables

By PAUL FINDLAY



## MARKETING FRUITS AND VEGETABLES LESSON 17

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The American Institute of Agriculture  
CHICAGO





**THE MAN WHO CONDUCTS THIS LESSON****PAUL FINDLAY**

At an early age, Mr. Findlay became interested in retail selling. He mastered the methods developed by the most successful grocers and applied these principles to his own business management, always progressive enough to round out the selling system with new ideas.

Recognizing his ability as a successful grocer and as a keen student of merchandising methods, the California Fruit Growers Exchange employed the services of Mr. Findlay as merchandising expert. In this position he traveled extensively, giving lectures to retail grocers on retail merchandising methods in general, with special reference to getting a wider outlet for California fruits.

With his practical experience, Mr. Findlay appreciates the importance of service in any retailing enterprise and knows that both direct and indirect methods of attracting sales and customers must be instituted. Mr. Findlay has injected the personal equation into his selling plans, and in his present position of Retail Merchandiser for the Honig-Cooper Co., San Francisco, has gained an enviable record as a merchandising expert.

### HOW TO STUDY THIS LESSON

No doubt you have noted a wide variation in the appearance of grocery stores and fruit stands where perishable products are offered for sale. Surely you appreciate the importance of an attractive display and dislike to patronize a merchant whose goods are not arranged in an orderly manner.

This lesson offers suggestions in merchandising fruits and vegetables that will increase the turnover of many retailers; likewise, it relates how a keen student of human nature can turn new ideas into new dollars. Bear in mind that it is prepared by an experienced merchandiser who has tried every device proposed and carefully measured results.

Remember also that any selling plan that might work out successfully at a store might well be followed at a roadside market. Volume of display, with opportunity for the customer to do his own selection, plays a most important part in selling perishable products.

One of the most successful roadside farm markets we know of has instituted the "Piggly Wiggly" idea and reports that this idea, coupled with the thought of making an extensive volume showing, more than tripled his sales in a very short time. Many roadside markets have regular customers, for the automobile has greatly extended the buying range of city patrons.

Study carefully the subject matter relating to margins and commissions, and discuss these figures with local merchants.

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## RETAILING FRUITS AND VEGETABLES

BY PAUL FINDLAY

Why should a grocer "bother with" perishables? Admittedly, the handling of perishables involves a lot of work — more work than any other single department in the business. They deteriorate rapidly, so that somebody must be concerned over them constantly. And the success of the department hinges on the prominence of the display, so they must be placed in the most valuable space in the store — in the windows, in and around the doorway, and wherever else they will catch the eye of the greatest number of consumers.

Are they worthy of all this preference?

Do they pay on this basis?

Do they, in short, pay their way and leave the grocer a net profit?

### Direct Profits

If you run your perishables department on the theory that it is a nuisance, that there's no money in it, but handle perishables only as an accommodation, it is perfectly clear that you will not make money in that department.

But if you will let yourself realize that merchants everywhere, in cities, towns and villages, make the perishables department pay liberally, you, too, can make splendid profits in this important department. When direct earnings are not realized on any merchandise, something is radically wrong. But it happens that a well handled perishables department has a collateral value in attracting and holding the most profitable character of trade that makes it as valuable for its indirect profit as it is for its direct earnings.

### Indirect Profits

Perhaps fully as important as either of the other considerations, skillfully handled perishables are a wonderful intrenchment and defense against the encroachments of present day aggressive competition and about the best ammunition you can find with which to fight it. Let us call such income indirect profits.

### DEVELOPMENT OF THE PERISHABLE FOODS BUSINESS

Because of the developments of recent years in the rapid transportation of perishables and the means of keeping them in excellent condition in transit, these commodities now reach practically every market from great distances. The assortment is immensely diversified and it might almost be said that, in so far as the consumer is concerned, there are no seasons.

Cold storage and refrigeration have come simultaneously with the intensive studies of dieticians and the practically universal dissemination of dietetic knowledge. The need for fresh foods is almost universally understood. Lettuce, celery, spinach, tomatoes, and asparagus are no longer regarded as luxuries or palate ticklers. These things are understood to be necessary in a properly balanced ration. It is now recognized as true that the majority of those who habitually consume a proper proportion of fresh fruits and vegetables seldom need the doctor's attention.

All this has resulted in a development in the perishables business which has enlarged its scope to a practically limitless extent. One of the results is that today many exclusive fruit and vegetable merchants, whose stores are open and well stocked every week in the year, pay as much as \$1,000 a month rent. Tiedtke Bros., Toledo, sell

from \$8,500 to \$15,000 worth of perishables a week, their yearly sales in this one department running over \$600,000.

All this indicates that any merchant can "go as far as he likes" in this department of his business. It also means that he must be enterprising, keep in daily touch with market conditions, be alert to new sales plans, and keep thoroughly posted on every phase of the business, or he will not be in the running at all.

### Store Equipment

Furniture and fixtures are properly the last consideration in the establishment of any department of the food business. This is especially true of the perishables department, for here the goods themselves are of such character as to be less dependent on surroundings than any other line.

Perishables should dominate all surroundings. The most effective display is the mass of goods and the more the goods are shown, the less anything else obtrudes, the greater the effectiveness. Again, perishables are not contaminable, generally speaking. No matter how they are grouped - just so the handling does not actually injure them, they can be cleansed, and, as a matter of fact, are cleansed by everybody before being used. Everything that is to be cooked is not only cleansed but the cooking is a perfect process of sterilization.

This reasoning applies particularly to fruits - especially oranges, lemons, and grapefruit, where the skin is nature's own protecting envelope - it explains why highly sensitive women who are accustomed to most refined surroundings are often patrons of most unattractive stores. They go there because the green products they find in those places are fresh, are rapidly sold and so kept fresh, and are shown in wide variety to the limit of the market.

So you will find prosperous perishables departments furnished only with up-ended orange boxes and stands built out of nondescript lumber which is merely covered with newspapers and often is perfectly bare. When you have developed and established your business on a sound basis, then it will be proper and also profitable to install marble and enameled iron fittings - drains, fountains, tile floors; and there are plenty of concerns to guide you in the best selection of such equipment.

### Quality Must Be the Highest

There is only one way to handle perishables. Whether the department be large or small, whether your assortment be widely varied or exceedingly limited, have absolutely the best of everything and keep and display it in the best possible condition.

You must put work, skill, character, individuality, established reputation - in short, the best that is in you of merchandising ability - into this department. And you must continue contributing these things progressively as long as you are in business. But you will find the work worth while, for if you handle the perishables department this way, it will pay you liberal profits, directly and indirectly, from every standpoint.

### You Must Know Your Goods

It is the grocer's business to know groceries. He must know them in the most intimate detail. He must know their points of origin, process of manufacture, methods of transportation, preservation and storage, and the uses to which each and every article can be put to realize the most out of it. That means that the grocer must be a life long student of merchandise and home economics.

Take the great staple of the perishables department - lettuce. There are three principal varieties: leaf, iceberg, and head. For salad of all kinds, head is the preferred article, generally

speaking, although leaf lettuce, especially if shredded, is liked by many consumers for many purposes.

Until comparatively recently, iceberg lettuce was usually accepted as a substitute for head when head could not be obtained. But in all divisions of the perishables industry, development is going forward constantly, and iceberg lettuce is no exception. In some sections, notably along the Atlantic seaboard, this article is being produced in a high state of perfection and is becoming daily more popular. It is peculiar, also, that it is being sold by the pound as a matter of custom, even in that territory.

These varieties must be handled by the individual grocer according to his circumstances, sources of supply and environment. But the fundamental is that they be kept in the best of condition and that the display be maintained in attractive shape.

#### How Lettuce Is Handled

Leaf lettuce at its best is assembled into uniform bunches which are pinned together, fan shape, with a wooden toothpick. This facilitates the packing of the lettuce flat in a barrel in a circular form and packing it in firmly so it will carry in good condition. When unpacked, it should be laid in the window in the same circular form, the stems being toward the center and the leaves out toward the circumference. It should be kept cool and wet. When handled, it should be picked up by the stems with the leaves hanging downwards, so they will not break.

Of course many customers, especially in a small town, will handle such delicate things in a most ruthless fashion. They will pick up the bunches by the stem and stand them up so they can count the leaves and see how many services they can get out of a bunch. The more tender and delicate the lettuce,



the greater is the damage which results from such practice. The only recourse for the merchant is to set his margin at a wide enough figure to absorb the shrinkage which comes from this abuse. In larger cities, grocers have signs: "Please do not touch this display." If a customer touches any of the lettuce or any other perishables, the merchant is apt to show his displeasure in no uncertain manner.

Lettuce can be cooked with green peas to great advantage. Tender young peas should be cooked as short time and in as little water as possible because water tends to dilute the flavor. A head of lettuce, whether of the ordinary kind or iceberg, should be put into the pot with the peas, with very little water and cooked rapidly for fifteen to twenty minutes. This process will preserve the flavor of the peas in a wonderful way.

These are simple hints on the handling of lettuce. Make it your business to learn all you can about the uses of lettuce, served raw and cooked, in all its possible combinations, and to keep abreast of new developments, so that you can tell your customers about new things, new ways of serving and new uses for table decorations.

### Peeled Asparagus

Have you ever heard of peeling fresh asparagus? How many housewives do you know who follow this practice?

Asparagus should be peeled and, if so treated, practically every part of it will be as tender as the tips. This method of handling makes asparagus a very economical vegetable instead of a luxury as now generally recognized.

For many years I have made it a practice to tell my customers, individually and personally, about peeling asparagus. Very few housekeepers seemed to know about this practice. Without exception, all were grateful for the information.

Properly speaking, this process should be called scraping instead of peeling. However, if you pass this information on to the housewife, she will quickly develop a skill and delicacy of touch which will be her surest guide in removing the portion of the asparagus which cannot be made tender by cooking.

### How to Dress Celery

Celery is another great staple, used everywhere and grown to greater or less perfection in many sections of the country. Celery which comes at its best from Kalamazoo, Milwaukee, or the vicinity of Salt Lake, for example, is very tender. Almost every leaf can be eaten raw, just as it comes from the field.

But celery from any producing section is at its apex of quality and tenderness only a very short time. Thereafter, the outer leaves are more or less tough and stringy and, unless your customers know how to dress the plants, considerable waste will result.

Tell your customers to strip off all the outer, coarser leaves and serve only the inner, tender leaves and hearts raw on the table. The coarser portions should be scraped on the outside to remove the strings and then cut into pieces about one inch long, put into a stew pan with just enough water to cover and simmered until it is tender. The celery should then be put into a vegetable dish, but the drained off "pot liquor" should be carefully saved. The pot liquor can be thickened with corn starch or flour, milk may be added, it may be enriched with butter and otherwise improved to suit anybody's taste. No condiment other than salt should be used, because the celery itself has the desired flavor. Pour the thickened gravy over the celery and serve as a vegetable. Here you have not only a delicious dish, but, because of the vegetable salts in the extracted pot liquor, you have a wholesome food.

Creamed soups are nourishing, soothing to the stomach, excellent for children and invalids. One of the best of these is creamed celery soup. In the making of that, the coarse portions need not be scraped because the straining out of the vegetable, leaving only the creamed pot liquor, will automatically remove all the strings.

These are merely hints of the study that must be put into all the details of this literally limitless department. Others will suggest themselves daily to the wakeful merchant.

### THE FOOD VALUE OF POT LIQUOR

Almost every kind of pot liquor has food value, plus more or less distinctive flavor, and can be used in soups to enhance their palatability and make them just so much more nourishing. Tell your customers that there is practically no kind of canned soup which will not be improved by the addition of pot liquor from peas, green beans, carrots, turnips, or spinach. The residue of spinach is peculiarly valuable in certain respects. Asparagus pot liquor is highly enough flavored to make a soup by itself and the same applies to celery. But either of these can be added to canned soups.

True, when such additions are made, the flavor of the soup is altered. It no longer conforms to the label. But that is a great advantage, properly considered, for thus individuality is given to something which otherwise is merely a factory product, evolved by somebody else, having none of the housewives' own personality in it. Moreover, the use of pot liquors of various kinds in soups, using whatever may be on hand at the time, furnishes an almost infinite variety of flavors. All this makes for greater pleasure and nourishment, plus economy. Pass all these hints to your customers and they will thank you for them.

### Be Enterprising!

A few years ago, two young Wisconsin grocers were looking over the price list of a South Water Street, Chicago, wholesale fruit and vegetable house. They noticed an item that seemed very strange. It was "celery-cabbage." They did not know what it was and the name gave them only a vague idea. But it was the practice of those men to have everything the market afforded. For example, when the first asparagus appeared on wholesale lists, they would buy a little of it even if it was so high that they had to use it in their own homes after having displayed it for a few days.

Once they bought asparagus at a wholesale cost of 30c per bunch. When it arrived, they were amused to find that each bunch consisted of three long green stalks, so the cost was 10c per stalk. They put a price of 40c per bunch on it, and, of course, did not sell any, but they were the first people in their town to have asparagus that year.

### Celery - Cabbage

Immediately, therefore, they ordered half a dozen celery-cabbage and asked the South Water Street people to tell them what it was, and how to use it. It arrived a day or two later, together with the information that this was Luther Burbank's latest creation in the vegetable kingdom; a cross between cabbage and celery; and that it had the virtues of both vegetables. It had the flavor and, to some extent, the appearance of celery. It looked like a mammoth bunch of celery, but the leaves were wide, thin and grew together tightly like cabbage leaves. It was an effective thing, each head being of generous proportions, and a distinct novelty. The price was not excessive and they were able to tell their customers that here was a new salad material.

This was something very delicious when shredded and served like cold-slaw and ordinary head lettuce

salad. The item sold like the proverbial hot cakes and added to both the profit and the reputation of the store.

### Casaba Melons

About the same time, those boys found Casaba melons listed. The price of these was high - something like \$7 per dozen. Nevertheless, they ordered half a dozen and asked for the description. Again they learned that this type of melon was Mr. Burbank's latest development in the fruit kingdom. Rather it should be called a combination of fruit and vegetable, perhaps, for it was a cross between watermelon, cantaloupe and cucumber. One of the melons was cut and sampled by the entire sales force so the clerks might know what they were talking about, and the melons were put on sale. The price was 75 to 95 cents, depending on the size, and they sold rapidly.

Here, then, were two instances in which this store was first. It was now in the lead. Only after celery-cabbage and Casaba melons had become familiar to the customers of this store were they stocked by other stores. Competition was literally two or three weeks behind.

This character of enterprise permeated all departments of that business, though naturally it was most immediately effective and striking in the ever-changing perishables department. It put that concern in the front rank of local grocers. They were always a lap or two ahead of competition. Customers knew they would always find the latest things in that grocery store and it was a common thing for a lady to give her order and then ask, quite frankly and expectantly, "Now what have you new to sell me today?"

That there is plenty of room for the same kind of enterprise may be illustrated by the fact that within the last two years I have seen celery-cabbage in only a few places. One of these places was the

stalls of a large market in Los Angeles. When I asked what it was, I was told it was "Ten Cents!" It took some time for me to impress those people with the thought that I wanted to find out about the thing itself and not its price. Finally a more intelligent gardener got the idea and told me it was "sweet salad." Further cross examination indicated that he knew no more about it. If this is true about a vegetable development which has been on the market for 10 years or more, it is clear that there is plenty of room for further study and the dissemination of information among consumers. And I can vouch for the fact that such work pays good returns.

### PERISHABLES IN SELF SERVICE STORES

Many of the chain stores in the country east of the Missouri River handle no perishables. This is because most of those stores serve wage earners on the basis of a limited range of stock at low prices. The appeal being practically all on price, service is cut down to the minimum. Many of those stores are one-man affairs. A single man opens the store in the morning, runs it until noon, closes for one hour, returns and runs it until 6 o'clock.

That man must do every bit of the work himself. He must keep stock, receive goods and display them for sale, mark the goods or put the price tags where they belong, keep things as clean as he can, make his window displays and serve his customers. As a usual thing, those stores carry nothing in the perishables line excepting potatoes and oranges and lemons, or only lemons. In other words, their perishables department is limited to a few of the least perishable staples.

The reason for this is that one man cannot keep a varied line of perishables in good condition and the management knows that if perishables are not kept in good condition, they are a source of loss in themselves, and since untidy displays drive

customers away through their unattractiveness, perishables would be a source of indirect loss also.

There are some exceptions. The Groceteria Company of Santa Monica operates a chain of self service stores and they always have handled perishables. But service has always been given in that department. The Piggly Wiggly stores have made a number of experiments in handling perishables. Formerly the department was in the rear, out of sight of the manager, and was always ragged. The manager in San Antonio stated that headquarters was about to make a change, and now I notice the perishables department is in front where customers still serve themselves, but the stock is under the eye of the manager.

Because of this general limitation of chain stores, especially self service stores, enterprising individual retailers have seen the opportunity to enlarge their perishables department and emphasize it in every possible way. This is where its collateral value comes in. It attracts people to your store. They come to buy their perishable supplies and then if they find in your store a well assorted line of groceries at prices which are high enough to cover the difference in expense - yet not too high - and realize they can supply all their wants from any one place, they get in the habit of buying everything from you.

#### IMPORTANCE OF RIGHT BUYING

Nobody can run a perishables department even approximately well who does not watch his buying constantly, with an eye to getting the best values every time he buys.

The same might be said of any department in any business - and it is true of everything, too. But the perishables business is one of constant, daily change. New things come - and in a few days they are

gone. Prices on first arrivals of anything are apt to be high. In a day or two arrivals crowd the market and prices drop steadily, sometimes precipitately. Only the buyer who knows daily markets daily can cope with such conditions.

### Quality Products Build Up Trade

Another thing must be remembered: that in the perishables business only the best goods will build trade. Therefore, if you find a buyer in a central market who is conscientious in finding the best goods for you at right prices, do not grudge his percentage. He earns every penny of it. And once you have found that man to be reliable, watch him, of course; but do not desert him for another without carefully considered cause. High grade supplies are the foundation of a successful perishables business.

### STANDARDIZING THE GOODS

Let me emphasize the fact and reiterate the statement that quality must be paramount in a perishables department. No matter what the goods are, assort, strip, wash, prune, and pick over everything so that your display will be perfect and attractive. Have no thought of price until first you have attained the highest standard of quality. As above indicated, everybody must assume that you are going to be alert in your buying. The goods must be standardized to the highest quality before any price is put on them.

After you have received your lettuce and counted against it every item of cost, including drayage, even if you bring it from the station in your own wagon, then prepare it for display, discarding all that is not in the finest condition, and make your prices to cover all costs and leave you a suitable margin.

Strawberries which are received in apparently slightly impaired condition must be most carefully



gone over before they are put on display. The removal of soft berries from the boxes will improve the display. And you must remember that if fewer berries are left, you are not depriving the customer of anything she could use. You are merely making the goods more attractive and really saving your customer the trouble of picking them over and incidentally thinking you are a poor merchant.

### THE UNIT OF SALE

Custom has decreed various units in different parts of the country for the sale of all merchandise, especially perishables. In the east and middle country, the dry measure formerly prevailed universally and in those sections, merchants still handle quarts of cranberries, pecks of peas and potatoes, and even such an uncertain and elusive thing as spinach is measured. In the West, say from the meridian of Denver, virtually all goods are sold by the pound. Local laws and regulations to a certain extent prescribe and limit mercantile practices in this connection. But, as a matter of practical fact, common sense is a good guide and generally can be made to prevail anywhere.

Take cranberries for example. How and in what circumstances is there a better way or a method more equitable and just than to weigh up the net contents of the barrel on receipt and then sell by the pound at a price fixed on that basis? Does not this reasoning apply equally well to potatoes and beans, whether green or dried? Why is not this the best practice with green peas? How can anybody expect to handle spinach equitably and just by any other system than by weight?

Apples, oranges, pears, and other similar articles which are standardized as to size, are always best handled by the dozen. In the western country aforesaid, the weighing habit is so prevalent that merchants generally weigh even such things as

apples, and that makes the sale thereof very uncertain for the reason that the scale may not "break" with a given number of apples and yet if one more apple is put in, the weight will be several ounces over. In order not to seem "small" the grocer generally gives the overweight. This means that he either curtails his profit or must increase his price to absorb this uncertainty.

This is an indication why it is always best to handle articles which are so generally standardized as to size by the dozen, and if your dozen prices are fixed in line with the teachings of most successful fruit retailers, you will promote the sale of dozens instead of smaller lots.

### THE ODD PRICE ON FRUITS

Few merchants appreciate the power of odd prices to attract trade. It is demonstrated almost daily that a price of 59 cents will sell apples or oranges by the dozen where 60 cents would result in sales of one, two, four, or six. The one cent concession results in such an acceleration of sales as makes its pay itself back hundreds of times in a single day.

This is not that odd prices are to be forced. When the right margin results in 30 cents, 40 cents, and so on, those prices should often be used. But thought should be given to what increased sales may be made by odd figures. A very successful grocer of Davenport, Iowa, has carried this plan clear through his business, with the result that he has prospered exceedingly. And he is only typical of many.

### CORRECT MARGINS ON PERISHABLES

Now we come to a question which might be discussed in detail through many dozens of pages. Therefore, let us consider only a few general principles, backed

up by some well known facts and widely prevalent practices, citing the examples of some merchants who are successful.

Before the World War a completely stocked, full service grocery store could operate a perishables department on an average margin of 30%, and have profit left. Now it is necessary to get an average of 33 1/3% to 35% for such a store to make any money.

Up to 1918, a chain of limited service stores like that of the H. G. Chaffee Company, Los Angeles, who at that time were operating around 25 stores, worked on 25% average margin. An investigation made in December of 1918 (and let me say that the management of any chain store system makes a practice of investigating one thing or another inside of its own business all the time), indicated that Chaffee must revise his average margin on perishables upward to around 30%. Today Chaffee operates about 70 stores and he still aims for 30%. He handles 15 to 16 tons of perishables per day and so should be in a preferred position to realize very close to any margin he aims at. He actually attains 29% on the average, eliminating all shrinkage, leakage, and other incidentals.

But, like all other merchandising problems, the catch and pitfall comes in the word "average." Merchants get the average expense or average margin in their mind and then are apt to feel that anything which pays less than the average entails a loss. Yet they hesitate to get more than the average on anything in any circumstances.

Well-posted merchants know perfectly well that an average is a figure struck between extremes. They know that staples which move in large volume rapidly pay well on margins that are less than the average; and that other, slow moving, highly perishable items must carry extra wide margins. All factors are modified by times, seasons, and circumstances.

For example, in ordinary circumstances, oranges and lemons at 20% by the box, or even less, and 25% by the dozen, cranberries at the height of the season and celery cabbage, or old style cabbage, at 20%, may all be very profitable in the same store and in the same circumstances where lettuce at the end of the season and certain kinds of apples and spinach might not carry their own burdens at 50%, to say nothing of profit.

We all know that at certain times sweet potatoes can be handled on a moderate margin very profitably and with satisfaction; but we also know that as the season advances toward the end, sweet potatoes will deteriorate so that they need constant picking over.

### Follow the Market Closely

If you are going to be successful in handling perishables, you must be "up on your toes" every day to follow the market absolutely. It is peculiar that merchants can appreciate this point when the market is advancing and it is either a joke or a tragedy - depending on how you look at it - how you get on their blind side when you make the same argument on a declining market. Yet it is just as true that any goods are worth no more than they cost to replace as it is that they are worth all that they cost to replace.

Perhaps the greatest single weakness of the individual merchant in running a perishables department is tardy reaction to declines which almost invariably follow the opening of any season. He will buy pears, for example, at \$4.50 the box and he will price them, logically enough, perhaps, to yield him \$6.00 the box. But new arrivals come on the market daily and it often happens that in as little as two or three days the wholesale cost drops off to \$3.00 the box and perhaps within a week to \$2.50 the box. Does he follow these costs down promptly? Remember, the chain store does.

Most individual grocers who buy pears at \$4.50 the box and price them at \$6.00 do not change these figures until they are compelled to go into the market again. In this way they may be a week or ten days behind the market and then they are literally throwing their trade away and driving it to other sources of supply.

Not long ago I had a good illustration of this individual grocer weakness. A friend of mine was buying some goods at a neighboring store where he saw some fairly good sweet potatoes. He asked the price. The grocer said they were four pounds for 25 cents. He happened to know that a down town market had those priced at 7 pounds for 25 cents and so, without indicating his knowledge, he protested. Thereupon the grocer said that he could not sell for less without losing money. What chance had that individual grocer to hold trade in such circumstances?

The fact of the matter was that the market on sweet potatoes had gone down very radically and the down town merchant had followed the market. No individual merchant can expect to hold trade on any such plan as that.

This point cannot be too strongly insisted upon. It cannot be emphasized too much. I shall quote some sources of information which will be helpful to you in this connection. In the meantime, let me tell you about something which may bring home to you the utter futility of trying to run a business successfully today on any such inadequate plan.

#### A VALUABLE CHAIN STORE "SECRET"

Frank E. Chaffee, manager of H. G. Chaffee Co., was discussing the well known weakness of the ordinary grocer who sets his price for any perishables on the basis of opening cost and then fails to reduce his figures, no matter how the market may drop off later, unless he is forced down by vigorous competition. Mr. Chaffee said:

**Make Opening Price Low**

"We do not work on the theory that it is wise to get all we can while the getting is good, which is usual with grocers who figure that the opening of any season is the time for wide prices.

"We feel that then is the time when everybody is interested. It is true that they will pay a high price at that time because they are hungry for the new product. But it is also true that they will notice and remember the price. Therefore, we reason that the opening price should be made as low as possible. Not only do we figure very closely then, but in some cases we take a slight loss - we let no thought of immediate profit influence us.

"This results in our getting the people in on the first offerings, when all our competitors are making high prices. When consumers come to us and find how low our prices are, they not only clean up our first offerings promptly, leaving the stocks bare for us to replace at new lower levels of cost, but they are pleased to get such moderate figures. We are apt to cinch their trade for keeps that way. It is a way we have of building our business.

"As the season settles, we do not decline quite as rapidly as our costs go down. That is the time to get a fair margin - and as a matter of fact our perishables earn us about 29% gross, average. We cash in during the run of the season.

"Now when the end of the season approaches, we get wide margins. That is because the risk is greater, the few who insist on having commodities which are disappearing are usually able and willing to pay a good price for them, and the ordinary trader has dropped out of the market."

So if you have been in the habit of "getting while the getting was good," maybe this hint from one of the conspicuously successful merchandisers of the country will be valuable to you. It is a good practice to take hints from successful men.

### Displaying Perishables

The perishables department belongs in the front of your store. It occupies, as I have said, your windows, doorway, and other prominent locations. That space costs you the most rent and is in every way the most valuable part of your premises. Why are the perishables given that preferred position?

Because perishables attract trade - if they are attractive.

Because thus they will sell - and they must be sold quickly or you will have leftovers instead of turnovers.

But anything that is put so prominently forward in your store must be made and kept in attractive condition every minute of the time or it will be just as potent to drive away trade as otherwise it is to attract trade.

The obvious thing is to have clean windows and dress the goods in those windows to the best of your ability early every morning. Unfortunately, however, that is as far as most even ordinarily good grocers go. As the hours pass, the display is permitted to become ragged and unattractive. This should never be permitted to occur. A display put in at around 7 o'clock in the morning should be gone over again at 9 or 10 o'clock, should be touched up from time to time during the forenoon and then just as soon as the noon let-up comes, it should be practically completely redressed, ready for the afternoon trade.

This is another point that can hardly be stressed too much.

### Shall You Have "Sales"?

I have often been surprised at the peculiar attitude of some grocers, especially those who think they enjoy a "class" trade, toward anything that savors of a "sale." Yet it must be apparent to

every wide-awake man that business exists by reason of sales; that if no sales were made, any business would die very promptly; and that it follows logically that the more activity there is in sales, the greater the prosperity of the business is apt to be.

One thing should be understood: "Sales" need not always be cut-price affairs, any more than advertising must be accompanied by specially low prices, as so many merchants seem to think is necessary. But every up-and-coming merchant will be alert to take advantage of fortunate market conditions and base sales thereon.

In department store circles sales are now called "events." Whether in a department store or a grocery store, the rapid disposal of a lot of goods in response to some favorable market condition is apt to be conducted apparently regardless of rules. While the perishables department, for example, may have to realize 33 1/3% to 35%, average, a special sale may be based on a 15%, a 9% or even a 5% margin; and in some instances the margin may almost disappear - yet the proceedings may be perfectly justified, for instance:

The correct normal margin on oranges and lemons is 25%, average. That margin is aimed at in practically all well-managed markets. In a certain town there was a very active institution which took advantage of conditions a year or two ago. At that time, 126 oranges cost \$5.50 the box locally because there was an over supply in the market which at the same time ranged \$6.50 to \$7.50 for other sizes. This manager took 25 boxes of 126 size, poured them in the window, marked them 59c per dozen, and sold them out in five days. Here the margin was under 12% - in fact, it was just a little over 11%; but the sale of this special lot was practically added onto the regular volume, for other sizes sold about as usual at the same time. The additional gross earnings were around \$17.25 for the week, with



no extra expense, and this special offer of big, handsome oranges built consumer good-will wherever they were sold.

### Always Specialize

An excellent example of how intelligent specialization in the perishable department pays directly and indirectly is to be found in the experience of Tebbetts & Garland, Chicago. This is a very large store, located on Michigan Avenue in the heart of the high rent district. Two or three years ago the figures of daily sales showed that Wednesday was the slow day. The management therefore concentrated on Wednesday with many special offers; but the most spectacular of all, perhaps, was mushrooms.

Mushrooms are something that most people like if they are properly prepared, and those who do not like them soon acquire the taste if given the chance. Usually, however, and in most places, mushrooms are priced so high that they are a luxury. At a retail price of anywhere from 85 cents to \$1 per pound, it is obvious that only a limited number of people can eat them at all and even those must regard them as a tid bit, something to be eaten only on rare occasions. Yet there are plenty of people who would enjoy with keen relish a really liberal "mess" of stewed or fried mushrooms if that vegetable were put within their reach.

The manager of Tebbetts & Garland has been well schooled in the magic of odd prices. Because he has a large business, he was able to interest certain South Water Street firms in selling him round lots of garden run mushrooms at about 33 cents or 34 cents a pound. These were not the extra large, selected even sized mushrooms, but they were equal in quality and intrinsic value and were acceptable to 95% of all consumers as in every respect perfectly satisfactory. He priced those mushrooms at 49 cents a pound and soon was selling 1,000 pounds or upward every Wednesday. When his sales reached this quan-

tity it was necessary for him to clean out whatever stock several South Water Street houses had on hand after their morning sales. His demand got to be so great that his cost was advanced and he now pays something like 36 cents or 39 cents; but he continues to sell at 49 cents a pound and his business increases every week.

This, as you can see, was very profitable strategy in itself, but the collateral value came about through Wednesday being lifted into his busiest day. In fact, that store is now open from Wednesday morning, clear through the day, another force comes on which works all night to catch up on the Wednesday orders and restock the store, and the store opens as usual on Thursday. Thus the dullest day has been turned to a continuous period of 36 hours of mid-week activity.

H. C. Eckert, first-class grocer of Matawan, New Jersey, has revolutionized his display from groceries to fresh perishables. This is because he sees so many stores about him where the exhibits are altogether canned and bottled goods. He feels he must be something different to make his store stand out attractively. So he makes fetching displays of perishables in his two large windows, and trade thus drawn to his store finds he has inside his store a line of canned, bottled, cartoned and bulk groceries much more varied than most stores are apt to have. His business has increased greatly since the change. He now enjoys a fine automobile trade, of which formerly he had very little.

That character - "personality" it is mostly called nowadays - is our chief asset we like to say, but how many of us do anything directly to bring that asset to the attention of people not already our customers? How many realize that we must pump new blood into our clientele every day, or it will wither up, blow away and leave us in the discard?

Eckert has demonstrated how thus to show ourselves to new people and to get new blood into our clientele. Eckert's character is his big asset, even as it is yours if you make it so. By showing goods more attractively, he gets people in. Then Eckert's "personality" - his character of store and service - get in their work, and Eckert prospers and builds business plus good will and profits.

There are thousands of ways to apply these hints. Naturally, you must think out the details and apply them to your environment by such adaptation as may be necessary. But everywhere are retail businesses which show how successful such thinking and planning can be made.

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### COSTS OF MARKETING FRUITS AND VEGETABLES

There is always a difference of opinion as to what is an appropriate margin or commission for merchants to charge for handling fruits and vegetables. The middleman is constantly accused of profiteering, and the producer is inclined to blame this agency for many of the existing ills in merchandising and selling practices.

The next lesson deals with the costs of marketing fruits and vegetables. It is the result of an exhaustive study in the merchandising of fruit and vegetable products and gives in a very concise and interesting way the results of this careful study. It shows in minute detail the margins commonly deducted by the retailer, the jobber, the wholesaler, and identifies their charges and country dealers' margins.

This lesson also shows graphically the grower's selling price, and suggests the means of adopting a plan that will make it possible to establish selling prices on such products based more nearly upon costs of production.

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Since there are no terms in this lesson that have not previously been defined or that are not familiar to our students, we did not deem it necessary to include a glossary for Lesson 17.

**QUESTIONS FOR FRUITS AND VEGETABLES LESSON 17**

As soon as you have mastered this lesson, answer these questions and submit your answers to The American Institute of Agriculture, Chicago, Ill., for grading or correction.

Do not fail to write your name, address, and matriculation number plainly on each set of answers you send. Be sure to give the number or letter of the lesson, and the number of each question answered. Write the question in full before writing the answer. Be brief and explicit. Confine your answer to the length indicated, if possible. Use a typewriter, if you have one.

Answer all questions. If any are omitted, the omission will count against you.

- I. Distinguish between direct and indirect profits, as applied to the merchandising of perishable products.
- II. What two factors have made it possible to increase and stabilize the sale and distribution of perishable products?
- III. Name some of the methods that have enabled retailers to increase sales of perishable products.
- IV. Name the advantages of merchandising vegetables in self-service stores.
- V. Name two of the most important steps necessary for the successful operation of a perishable department.
- VI. What advantages are gained by adopting the odd price method over the unit price method in selling fruits and vegetables?
- VII. What is the usual margin of profit on a percentage basis adopted by merchants in selling perishable products?
- VIII. Relate briefly the experience of Frank E. Chaffee in merchandising perishable products.
- IX. State the advantages and disadvantages of special sales.
- X. State the experience of Tebbetts & Garland, Chicago, and H. C. Eckert of Matawan, N. J., which resulted in increasing materially their sales of perishable products.





# The Costs of Marketing Fruits and Vegetables

By A. V. SWARTHOUT



MARKETING FRUITS AND VEGETABLES  
LESSON 18

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Issued for Members

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CHICAGO





## MARKETING COSTS

H. E. ERDMAN  
DIVISION OF  
RURAL INSTITUTIONS  
UNIVERSITY OF CALIFORNIA  
BERKELEY, CAL.

### THE MAN WHO CONDUCTS THIS LESSON

#### A. V. SWARTHOUT

A. V. Swarthout, being a certified public accountant, was employed by the Bureau of Markets to conduct studies in the cost of marketing and to ascertain market business practices.

Having been reared on a farm in the fruit producing section of Michigan and later completing the horticultural course at the Oregon Agricultural College, Mr. Swarthout was especially qualified to study the commercial end of marketing perishable products.

Mr. Swarthout is now associated with the Bureau of Agricultural Economics at Washington.

### HOW TO STUDY THIS LESSON

It must be remembered that the profitable production of fruits and vegetables is limited to certain areas. Arcostock County in Maine has a nation-wide reputation as a potato growing section. Certain areas in Michigan are noted for the production of apples, while Niagara County, New York, is famous for its vineyards. It would be a simple matter to identify other sections by mentioning the particular fruit or vegetable product that has made the location famous.

Remember, then, in studying this lesson, that problems of production are relatively simple as compared with the problem of marketing perishable products.

Do not make the common mistake of assuming that the difference between what the farmer receives for a perishable product and what the consumer pays for this product is necessarily absorbed by the middlemen. Service costs money, and every time a product is handled, additional expense is involved.

That margins vary with the several products is common knowledge. It is not easy to reconcile the wide variation in margins that apply to the same commodity in different sections of the country. But when we realize that the term "margin" in one instance may cover one class of charges and that in another instance it will include additional services, it is easier to appreciate the deviations noted.

Bear in mind that unless a given service can be dispensed with in the orderly marketing of perishable products, it is idle to assume that the mere creation of a new marketing agency will tend to reduce the cost of marketing.

**STUDY OUTLINE**

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# THE COSTS OF MARKETING FRUITS AND VEGETABLES

BY A. V. SWARTHOUT

During the past few years, there has been insistent and increasing demand for accurate and complete information concerning the costs of marketing, and particularly the marketing of fruits and vegetables.

The demand for this information has come largely from producers who feel that they are not getting a fair share of the consumer's price, and from consumers who feel that the price they pay for products is too high. Each of these groups contend that the margins taken by the so-called middlemen are unduly large and that both groups would be greatly benefit if it were possible to reduce these margins. The demand for this type of information has come from both the distributors, or middlemen, and the producers, who feel that accurate information concerning the matter would in a large measure tend to clarify the situation.

## The Relation of Costs to Profits

Much of the discussion on this subject is due to a lack of understanding of the nature of costs and their relation to profits, and the use which can be made of such data once they are available. The demand generally has been for a specific figure representing the cost of marketing some particular product, this figure usually having been thought of as an average. As a matter of fact, no single figure can be taken which will adequately represent costs of marketing. It is essential that we know the variations from this average.

Ordinarily, there are as many separate distinct costs as there are individual organizations engaged in distribution. Each channel through which the commodity flows on its way from the producer to the consumer will have an entirely distinct cost. The costs of the individual organizations performing the same service tend to be more uniform, but even within this small group there will be large variations.

An average represents a figure about which are grouped more or less closely individual items, and while it is used to represent the costs of marketing a particular product through a definite channel, one would be certain to find an almost infinite number of times when the costs did not agree with this average. The average is useful only in suggesting a sort of standard with which we can compare the costs of the individual functionnaires and note their relative efficiency.

#### What Is Meant by Costs of Marketing

Another way in which the discussions of costs have gone astray, is in the failure to understand exactly what is meant by costs of marketing.

To most people who have thought only casually about the matter, the difference between what the producer gets for his product and what the consumer pays is the cost of marketing. While this is true in a broad sense, it is not the whole truth, and unless one differentiates very carefully between this type of cost data and the more detailed type which can be obtained only by an examination of accounting records, and which breaks up this spread into its component parts of actual cost and profit to the operator, considerable misunderstanding will result.

A study based on the spread between producer's and consumer's prices involves:

1. The collection of accurate prices for each step in the marketing process

2. The determination of the spread, or margin, between the buying and selling prices of each *fonctionnaire*

3. The ascertainment of the charge made for such services as do not involve actual purchase and sale, such as, the services of commission men and brokers

While, at first thought, this seems a relatively simple matter, further thought makes it evident that these margins are valuable only when the prices used are for commodities of identical quality; that these prices must be collected from dealers representative of all types within the particular field; that, inasmuch as the margins vary in size from time to time, the study must cover a sufficient length of time to take in these fluctuations; and, that the selection of an average which will most nearly represent the whole involves some rather nice distinctions in statistical method.

However, these difficulties are not to be compared with those encountered when an accounting analysis is attempted. One is then confronted with the task of finding accurate and complete records, which are rare, and with the much more difficult task of allocating a proper share of joint costs to the particular commodity under consideration.

Comprehensive data on the cost of marketing any agricultural product is difficult to obtain and verify. The bulk of the information available is meagre and incomplete, and practically all of it is based on price studies, from which can be obtained only approximate margins. These are, of course, averages of relatively wide fluctuations, and can at best present only a theoretical concept.

### Marketing and Distribution

The Joint Commission of Agricultural Inquiry has collected and published more of these data than any other agency up to the present time. Its report

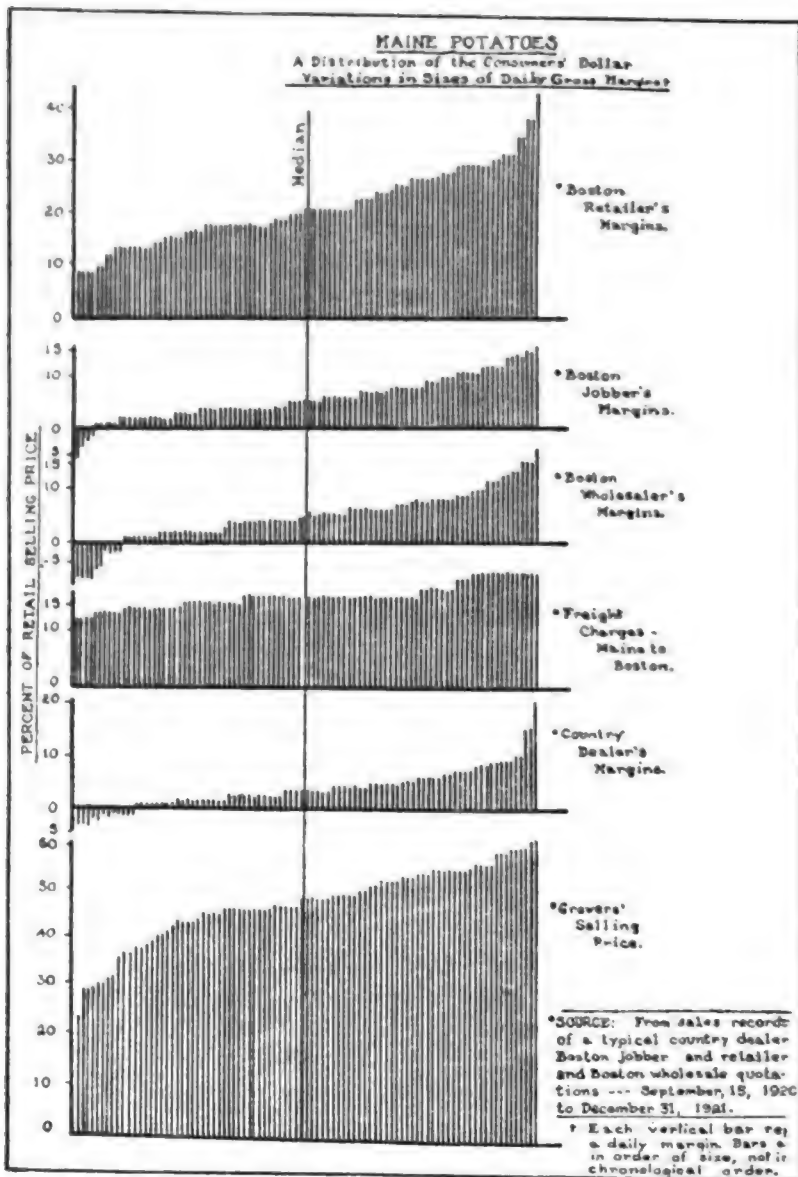
on Marketing and Distribution contains a large amount of information, even a casual reading of which impresses the reader with the overwhelming importance of distribution costs, and the necessity for comprehensive and complete studies, to the end that we may learn where economies may be effected and methods improved.

These margin studies are helpful in directing the way to points in the marketing channel where detailed studies might possibly be productive of the greatest results, and in giving us a rough picture of the relative size of the toll taken by the various fonctionnaires, but they are of doubtful value as an aid to improving the efficiency of the marketing process.

### HOW MARGINS VARY

Since, however, margin data are about all that are available, let us look at the information such a study will give us and note some of its peculiarities. Figure 1 indicates the wide variation in margins in the marketing of Maine potatoes in Boston. Because these data have been compiled, we will use them to illustrate our discussions.

Probably the most notable thing about these charts is the wide variation in some of the margins. This is not unusual, however, and as they are prepared from prices collected twice a week over a period of 16 months, they probably present a good picture of what we may normally expect. Each line on the charts represents the size of a single margin expressed as a percentage of the retail selling price. They are arranged in the charts in order of size, not by dates. Probably, more than any other thing, they emphasize what has been mentioned previously, namely, the need of conducting studies over a period of sufficient length that we are reasonably certain that high and low margins have been given equal consideration.



**FIGURE 1. DISTRIBUTION OF THE CONSUMER'S DOLLAR**  
This chart identifies the statistical method employed in striking an average range of costs of any given product



A range of margins similar to those shown in Figure 1 means little to the average observer, and, in fact, it is difficult for even a trained observer to grasp the significance of such charts or the figures from which they are compiled. In order, therefore, that their significance may be more easily grasped, we make use of statistical method and employ a type of average which will best represent the entire range. An average is dangerous unless we keep in mind that it is but a figure around which we group the individual items - a sort of standard.

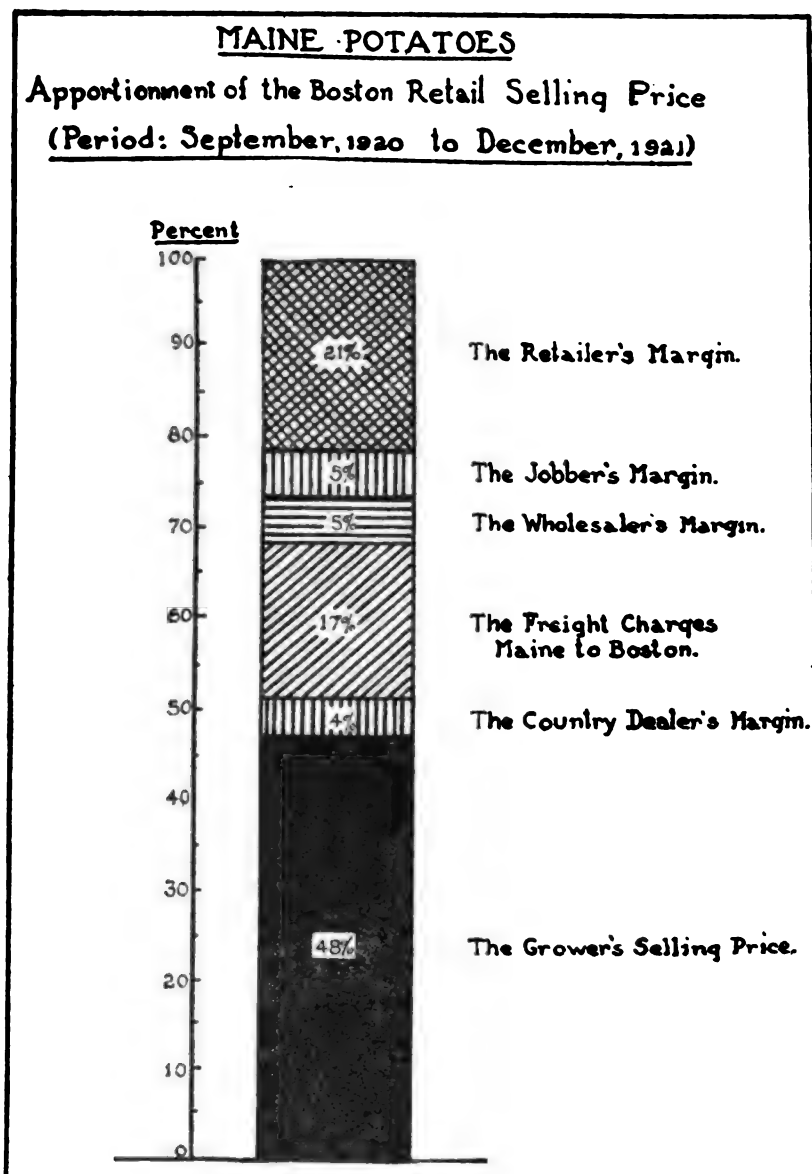
### What Do Margins Cover

The toll taken by the various agencies of distribution has been the subject of considerable discussion, some of which has not always been with a clear understanding of either the size of the margin, or of the services rendered in return for it. It is important that these two things be kept clearly in mind, and, of the two, it is more important that we understand thoroughly the nature and extent of the services rendered, for then only are we able to estimate accurately their value. A knowledge of the size of the margin is of little value unless we know what it covers.

With these statements in mind, let us examine Figure 2. This chart is an analysis of the Boston retail selling price of Maine potatoes, so constructed as to show the average portion of this price which each fonctionnaire took in return for his services.

### The Cost of Marketing

When the crop is ready for market, the farmer usually hauls them to town and sells them to the country dealer. He sells for the best price obtainable and the difference between this price and that which will later be paid by the consumer is what we shall consider, for the present, the cost of market-



**FIGURE 2. HOW SELLING PRICE OF MAINE POTATOES IS APPORTIONED**

An analysis of the Boston retail selling price of Maine potatoes, identifying the portion of the entire selling price that is absorbed by each agency that handles the product

ing. In this case it is 52% of the retail selling price. The size of this spread is the cause of some considerable discontent and many charges of gouging and profiteering. These charges may or may not be justified, but before they are made, it may be well to understand just what has been done which might explain the cause of this increase in price.

Service Charges - In the first place, the potatoes which the housewife buys are a vastly different article from those which the farmer sold. To the value of the commodity, as such, have been added a host of service charges, a large portion of which is, either directly or indirectly, a charge for labor. Mere commodity value has been almost lost sight of in the cost of the services which have been furnished in getting the product into the consumer's hands.

The country dealer, on the average, took a margin equal to 4% of the retail price. If the retail price was \$3 per bushel, this would amount to 12 cents. In return for this, he must pay for the labor of sacking and grading, the cost of sacks, maintain a warehouse in which to carry on the operations, pay charges for special cars, provide the money to finance this assembling into carloads and transportation and sale to the market. He must also assume the risk of shrinkage and spoilage, as well as that of being unable to sell for a price in advance of that paid. Compensation for his own services and any possible profit must also be afforded out of this 4%.

Transportation Charges - Freight charges from Maine points to Boston absorbed 17% of the retail price. Out of this, the railroad must pay for such items as the labor of running trains, repairing equipment, maintaining tracks and other property, and afford any interest on investment.

Wholesaler's Charges - In a similar way, we may analyze the services furnished by the wholesaler and jobber, who received 5% each, of the retail price. The wholesaler buys in large lots, generally carloads, from the country dealer. Occasionally he operates as a commission man and handles relatively small lots direct from producers. When so operating, however, he is apt to be designated as a receiver, wholesale receiver, commission merchant, or some similar term, rather than as "wholesaler."

The essential distinction, however, is that he deals in large lots, breaks these up into lots suitable for sale to the jobber, maintains offices and other facilities, and is of especial service in making and keeping contact between those who have commodities to sell and those who desire to buy. His profits arise from small margins on many and large transactions.

Jobbers Charges - The jobber usually buys from the wholesaler in lots suitable for his trade. He sells to retailers in still smaller lots, mostly in single package lots. He must at all times know the market-field in which he operates, and be in position at all times to furnish almost any commodity in this field in any quantity desired by the retailer.

These two functionnaires are not always clearly defined, inasmuch as the wholesaler frequently sells to the retailer in small lots, while the jobber frequently buys in carload lots from country dealers, or producers.

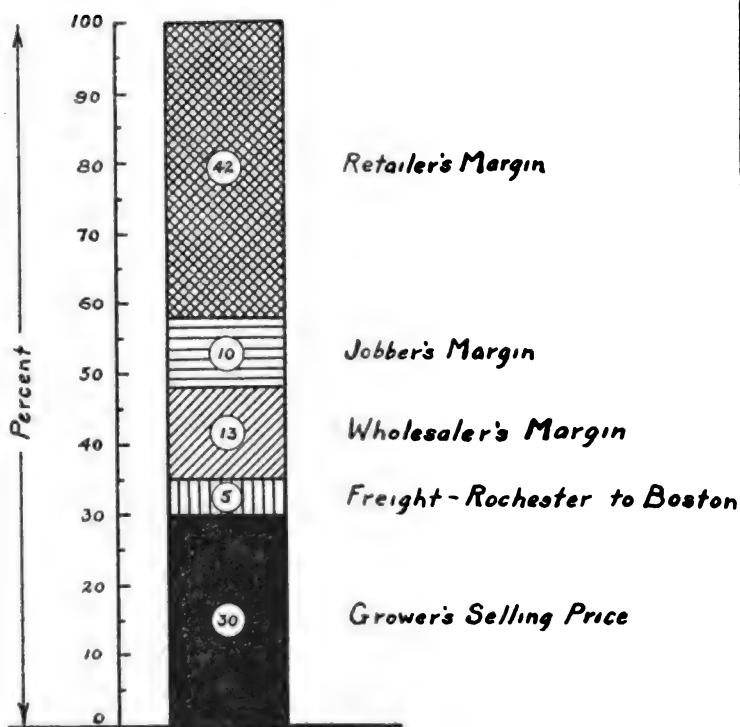
#### What the Retailer Received

The retailer received 21% of his selling price. Out of this he must pay rent, labor of clerks, deliverymen, and office help, the maintenance of delivery equipment, and similar items.

Under our modern system of retailing, we ask much more of this functionnaire than was previously the case. We are not content that he should provide,

## ROCHESTER (NY) CABBAGE ANALYSIS OF BOSTON RETAIL SELLING PRICE

*October 1921 to March 1922*



**FIGURE 3. ANALYSIS OF RETAIL SELLING PRICE OF CABBAGE**  
This chart details the marketing process in the handling of cabbage.  
Note its similarity in range and distribution of costs to that prevailing at Boston in the marketing of potatoes

in the majority of cases, the particular brand of oatmeal we desire, our favorite kind of canned peas, or corn, or catsup. Now, he must enter the draying business and set our purchases at our door, and frequently, at a time which best suits our conveniences. We expect him to become something of a banker and furnish us credit until such time as we can conveniently pay the bill - and we object to paying any interest.

The percentages used are averages of the figures in Figure 1. Turn back to this chart and see what the variations are from this average. The retailer received a margin as small as 9% and, again, as high as 42%. All three of the other dealers, the jobber, the wholesaler, and the country dealer, at some time failed to sell for as much as they paid, and their margins varied from a loss of slightly over 5%, to a gain of nearly 15%.

This same variation in margins is always present, and it is easy to understand why similar information from only one or two transactions may be misleading. It would be possible to prepare an analysis of the retail price which would vary for every transaction observed, no one of which would even roughly represent what normally or actually happened.

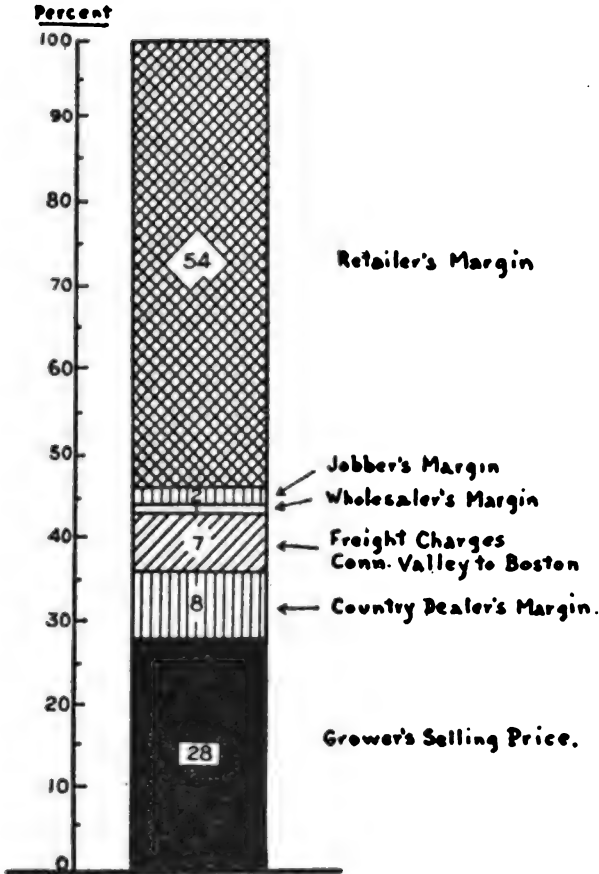
In the marketing of Rochester, N. Y., cabbage in Boston, Figure 3, we find the same marketing process as in the case of potatoes, though with somewhat larger portion of the retail selling price being absorbed by the marketing costs. These data cover approximately the crop season of 1921-1922. For this reason, they must be considered incomplete, and they can only be considered as an approximation.

When we look at the marketing of Connecticut Valley onions in Boston, Figure 4, we find the same marketing channel to be the one most common. The same fonctionnaires persist, although it is prob-

**CONNECTICUT VALLEY (MASS) ONIONS**

Division of Boston Retail Selling Price

(August 1920 to December 1921)



SOURCE: From sales records of a typical country dealer, Boston Jobber and retailer, and Boston Wholesale quotations --- August 1920 to December 1921

**FIGURE 4. MARGINS ABSORBED IN SERVICE CHARGES**  
This figure gives the deductions and charges made by the several agencies handling onions in Connecticut

able that their services vary slightly. In this case, note the large portion of the retail price which is absorbed by the costs of marketing.

### RECAPITULATION

In the marketing of these three vegetables, the cost of marketing has absorbed 52% in the case of Maine potatoes, 72% in the case of Connecticut Valley onions, and 70% in the case of Rochester (N. Y.) cabbage. Of these costs, the retailing service has, in each instance, required the largest portion, varying from 21% for potatoes to 54% for the onions. The services of all other middlemen, excluding freight, cost 11% in the case of onions, 14% for potatoes, and 23% for cabbage of the average retail selling price for the periods under consideration.

The retail price often covers much besides the value of the commodity from the producer to the ultimate consumer. Rarely does one individual furnish all these services, and the margins which we have observed measure the cost of the services of the different fonctionnaires. These margins are not profit, as they are often unthinkingly described, but out of them must be paid the costs of labor, rent, and other expenses of conducting a business.

### Analyze Accounting Records for Real Costs

There has been a great deal of discussion about the profits of the middleman. Margin studies will not show us what those profits are. To determine these, we must employ the other type of cost study which has already been mentioned, that is, an analysis of the accounting records of the various organizations. Only by such an analysis of accounting records is it possible to determine real costs, profits, and relative efficiencies. As in the case of our margins, no thoroughly fundamental information can be obtained by this method, except when



these studies are continued over considerable periods of time and cover a relatively large number of organizations in the same line of business. As in the case of our margin studies, there are tremendous difficulties to such a study.

The Bureau of Agricultural Economics has made some preliminary investigations of this nature. Other agencies have made studies of a similar nature, and there is gradually being built up a considerable body of information relative to the costs and profits in different lines of industry.

The Harvard Bureau of Business Research has for a number of years conducted studies of the retail grocery trade, and through its publications we have some definite information as to the profits of this type of organization. Potatoes are sold by retail groceries chiefly, and it is interesting to note that out of this 21% which Figure 2 shows to be the retailer's margin in the marketing of potatoes, 2% on the average is the net profit accruing to the grocer. On a basis of a retail price of \$3 per bushel for potatoes, the net profit to the grocer would be approximately six cents.

It would be possible to find more instances of this kind, but figures are not easy to comprehend, and it is better to understand some of the things behind figures than to memorize the figures themselves.

#### Actual Net Profit Should be Determined

These profit figures are averages and should be remembered and used with all the caution which has been indicated as applying to an average. What to determine, for instance, is the actual net profit, not the average, on the sale of a bushel of potatoes.

Here we come in contact with one of the most vexatious and complicated problems known to modern industry, that of joint costs. There seems no one

solution and it appears that every single instance must be subject to individual and careful scrutiny and investigation. In the retail store, before we can determine these actual costs and profits, we must learn what portion of the store rental should be charged against the bushel of potatoes; how much clerical hire against 10 pounds of cabbage; how much insurance against a sack of onions. These difficulties are not unsurmountable, but they cannot be solved by off-hand observation. Only by a careful study extending over long periods can we arrive at conclusions which are just to producer, consumer, or distributor.

### Plans Advocated for Reducing Costs

A casual examination of the charts in this discussion forces the student to the conclusion that the reduction of the costs of marketing is one of the most important problems which face agriculture today. It is almost impossible to look through any of our agricultural periodicals without finding some discussion of the subject.

The proposals which advocate the elimination of middlemen probably make the greatest popular appeal. The plan of utilizing farmers' cooperative marketing organizations as a means to this end, has its followers.

But the advocates of such plans do not seem to recognize that, while it is always possible to eliminate an individual middleman, and often possible to displace all of them in any particular group or class, that such action has not done away with the necessity for the services this class performed. These are important and they cannot be performed without some cost. If the new agency can perform them at less cost, then something has been accomplished. But there is always some question as to whether this can be done, and integration should not be attempted without a very careful study of the methods and their cost.

Cooperative organizations frequently eliminate the country dealer, but they must perform his services. If they succeed in doing so at no greater cost, they have only eliminated his profit, which is insignificant.

The greatest error of our distributive system is not that we have permitted such large profits to be taken by the individual distributor, but that we have permitted such outrageous wastes and such inefficient methods to be pursued year after year without any concrete and definite plan of study, looking toward a betterment of conditions.

### FINDINGS OF JOINT COUNCIL

The wholesale distribution of fruits and vegetables has likewise been subjected to a great deal of criticism. Few people realize to what extent the railroads have gone toward providing suitable equipment for transporting perishable products. In this connection, it is worth while to consider some of the findings of the Joint Council of Commission Merchants, Jobbers, and Apple Shippers, that made an extensive survey of transportation and merchandising costs in marketing fruits and vegetables.

The objects of the survey were to ascertain:

1. The wholesale selling price of representative fruits and vegetables and the amount paid for freight charges
2. To determine the actual handling costs paid by the wholesale dealer, including such items as storage, cartage, reconditioning, unloading, and repacking
3. To determine profits or losses made by commission merchants and wholesale dealers in the several commodities classified as perishables

The survey included compilation of data involving 9,476 cars of fresh fruits and vegetables distributed to the leading market centers.

Summarizing the division of the wholesaler's dollar, the report indicates the following distribution:

	<u>Per Cent</u>
Shipper .....	59.62
Freight charges .....	31.79
Wholesaler's gross profit..	3.16
Miscellaneous costs, including transportation tax...	5.43
	<u>100.00</u>

It is interesting to note that the freight charges on the several commodities varied from 12% in the case of barrel apples, to 75.12% in the case of Texas cabbage. The wholesaler's gross profit from 10 of the commodities was as follows:

	<u>Per Cent</u>
Barrel apples	2.03
Box apples	2.13
Bulk apples	5.79
California asparagus	8.00
California cantaloupe	7.24
Florida citrus fruits	4.38
Celery	6.47
Mixed vegetables	8.13
Miscellaneous fruits	7.00
Texas onions	7.00
California prunes	5.57
Sweet potatoes	2.84

Spinach, watermelons, and tomatoes were handled at an actual loss.

It will be noted from these figures that the wholesaler's net profits are not excessive and that they are scarcely commensurate with the hazards that inevitably follow the merchandising of perishable products. Among the findings of this Joint Commission, the following statement is significant:

"Whatever faults the present system of distribution may have, it is the product of knowledge, experience, initiative, the keenest competition and the play of fundamental economic principles of years. It is the outcome of commercial experience and needs, precisely the same as any other industry. If it had not demonstrated its efficiency and economy, it could not have endured. It has made possible the production of fresh fruits and vegetables on a scale not known elsewhere. It has created an unequalled demand for these commodities and distributes them over areas and under conditions unknown to other countries. It has created and developed markets as in no other country, distributing the perishable food products of the United States over the entire United States, in Canada, Europe, Australia, South America, and Asia. It has been the pioneer in the development of grades and standardization and the storage and conservation of these products. It has been one of the great impelling forces in the development of the refrigerator car and the transportation of perishable food commodities. It has made the fruits and vegetables of this and other countries available to all our people. It has done and is doing all of this at a minimum of expense and at the most a small average profit.

"A system which even helps to make these things possible, and under which the production and distribution of fresh fruits and vegetables more than quadrupled in 20 years, must have something of merit in it.

"Like all human institutions, whether religious, social, governmental or commercial, it is not perfect. Perfection, as most people know who have given even casual consideration to their respective vocations and lives, is not easy of attainment. That the industry is forward looking, that it is progressive, that it has advanced, that it is ever ready to work to higher levels of efficiency, service, and ideals, and that by and large it ranks equal with any industry in honor and integrity, will be vouched for by all those who have approached the subject helpfully and intelligently."

### HOW TO SOLVE THE PROBLEM

The solution of the problem must be secured through a betterment of methods and an elimination of wasteful and uneconomic practices. Cooperative organization of producers can play a very important part, not by indiscriminate taking over of the functions of middlemen, but by improvement in the products, the standardization of grades and packages, and the insistence that only the most advanced and efficient methods be tolerated.

Improvement can come only when we understand and apply more efficient, and hence, less costly, methods, many of which are to be found in the present marketing structure. Lasting improvement cannot come from an appeal to class prejudice; from charges of dishonesty and profiteering based on no more solid foundation than uninformed agitation. We must have facts before acts. And only by unbiased, scientific study can we gain these facts.

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### MARKETING APPLES AND PEACHES

Two fruit products, namely apples and peaches, are extensively produced in this country. Improved methods in the grading, packing, and marketing of these fruits has enabled the producer who has adopted modern methods to market his products at greater profit.

The nature of the pack, the kind of package, and the manner of handling the fruit from the time it is picked from the tree until it is displayed in the window of the grocery store, is presented in a most interesting way in the lesson that follows.

**QUESTIONS FOR FRUITS AND VEGETABLES LESSON 18**

As soon as you have mastered this lesson, answer these questions and submit your answers to The American Institute of Agriculture, Chicago, Ill., for grading or correction.

Do not fail to write your name, address, and matriculation number plainly on each set of answers you send. Be sure to give the number or letter of the lesson, and the number of each question answered. Write the question in full before writing the answer. Be brief and explicit. Confine your answer to the length indicated, if possible. Use a typewriter, if you have one.

Answer all questions. If any are omitted, the omission will count against you.

- I. Why do margins deducted by middlemen handling fruits and vegetables vary so widely?
- II. In determining costs of marketing fruits and vegetables, what does the spread between producer and consumer prices involve?
- III. Why is it so difficult to obtain data relating to the cost of marketing fruits and vegetables?
- IV. Distinguish between the services rendered by the wholesaler and the jobber who deals in fruits and vegetables.
- V. Give in percentage the margins tabulated covering the handling of a shipment of Connecticut Valley onions to the Boston market.
- VI. In a shipment of cabbage from Rochester, N. Y., to Boston, what was the grower's selling price and the retailer's margin?
- VII. In the marketing of the three vegetables, namely, cabbage, onions, and potatoes, what percentage of the marketing cost was absorbed in the handling of each?
- VIII. What was the range deducted for retailing service with these products?
- IX. How much did the middlemen obtain for their services?
- X. How was the wholesaler's dollar divided on reports submitted by the Joint Council, involving the handling of 9,476 cars of fresh fruits and vegetables?









# Marketing Apples and Peaches

BY ARTHUR J. FARLEY



## MARKETING FRUITS AND VEGETABLES LESSON 19

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Issued for Members

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The American Institute of Agriculture  
CHICAGO



## **THE MAN WHO CONDUCTS THIS LESSON**

### **ARTHUR J. FARLEY**

Arthur J. Farley graduated from the Massachusetts Agricultural College in 1907, and forthwith joined the teaching staff of the University of New Jersey. Being especially interested in pomology, the management of the college orchards, likewise the branch experimental orchards, supervised by the Experiment Station, was included in his assignment.

Thus, Mr. Farley combined teaching with practical field and research work, and the results of his energetic efforts are highly appreciated by the horticultural interests of this country.

Appreciating the importance of more efficient methods of packing, grading, and marketing apples and peaches, Mr. Farley established contact with merchandising agencies in New York City, Philadelphia, and other terminal market centers, that enabled him to market the state's surplus peaches and apples efficiently and profitably.

### HOW TO STUDY THIS LESSON

The marketing of apples and peaches is of great concern to the fruit grower. In many producing sections very little attention has been given to the question of grading and packing, resulting in the bulk of the product going to market in a jumbled pack.

The western grower was among the first to recognize the importance of standardization of fruit packages. Apples from this district were successfully shipped to eastern markets and merchandised at prices considerably in advance of the products from local orchards.

As you study this lesson, secure, if possible, standard packages commonly used for packing both apples and peaches.

Familiarize yourself with the methods suggested as meeting market conditions. If possible, familiarize yourself with the methods used by the most successful orchardists in your territory.

At the local grocery store you can get a very definite idea as to the importance of the up-to-date methods in grading, packing, and shipment of these products.

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# **MARKETING APPLES AND PEACHES**

**By**

**ARTHUR J. FARLEY**

The successful marketing of such perishable products as apples and peaches presents problems of great importance to the commercial fruit grower.

It requires fully as much industry and skill to market a crop of fruit successfully as it does to grow it. Many men who are very successful fruit growers fail to market their fruit to the best advantage.

Picking, grading, and packing are fundamental factors involved in the successful marketing of apples and peaches, and, therefore, should receive careful consideration.

## **HOW AND WHEN TO PICK APPLES AND PEACHES**

The first step toward the successful marketing of a crop of fruit is that of picking at the right time, and in the proper manner. The stage of maturity at which an apple or a peach should be picked varies with the variety, and the market in which it is to be sold. Many varieties of summer apples are picked as soon as they reach a good marketable size without much regard for color or maturity. Most varieties of apples, however, should not be picked until they are fully mature, and well colored.

### **How Maturity Is Indicated**

Maturity is indicated by size, color of skin and seeds, and the ease with which the fruit can be picked with the stem intact.

The size, quality, and color of peaches increases every day the fruit is left on the trees, thereby



making it very desirable to leave the fruit on the trees as long as possible, and at the same time be sure that it will reach the market in good condition. Green, immature fruit is not only of inferior quality, but presents a poor appearance on the market, and, therefore, sells for a low price. Soft fruit, on the other hand, reduces the speed of graders and packers, and will not stand shipment.

A peach is not ready to pick, even for distant shipment, until it loses its hard, unattractive, green color and begins to show a rather light cream color where the red color does not predominate. The degree of maturity should never be determined by the amount of red color. Pickers should never be allowed to test the degree of maturity by pinching the fruit. It is also essential that the pickers be careful and properly organized. A competent foreman should see that the pickers handle the fruit in a careful manner, and remove only those specimens that are in the proper condition.

Small bruises, made in the orchard or packing house, often increase to four or five times the size by the time the fruit reaches the market. It is generally necessary to make at least three pickings of peaches, going over each tree every other day. It is also desirable to make at least two pickings of many varieties of apples in order to secure fruit as uniform as possible in size and color.

Very often great damage results while transporting the fruit from the orchard to the packing house or from the packing house to the point of shipment. Of course such bruises do not show up until the product reaches the retail market.

### **PACKAGES USED FOR MARKETING APPLES AND PEACHES**

The requirements of a good fruit package are:

1. Withstand rough handling without breaking
2. Light in weight and not too expensive

3. Neat and attractive in appearance
4. Standard and convenient in size
5. Easy to handle and pack into cars or trucks
6. Rigid enough to prevent bruising of fruit
7. Adapted to market requirements.

### The Apple Barrel

The barrel is the most common package used for marketing fall and winter varieties of apples, grown east of the Mississippi. The standard apple barrel has the following dimensions:

	<u>Inches</u>
Length of stave	28½
Diameter of head	17½
Distance between heads	26
Circumference of bulge	64
(outside measurement)	

A barrel with the above dimensions represents 7,056 cubic inches, or 96 quarts. A standard apple barrel, stands up well under rough handling, and is a very economical package in which to pack and market a large crop of fruit. Furthermore, it is recognized as a standard package for apples in all markets. On the other hand, the barrel contains too much fruit for the average individual buyer, and is not generally considered as a package for fancy fruit. It is also unwieldy to handle and is liable to bruise fruit with tender skin and flesh.

### The Apple Box

The box occupies the same position in the marketing of Western apples that the barrel holds in the East. The inside dimensions of the standard apple box are as follows:

	<u>Inches</u>
Depth	10½
Width	11½
Length	18

or 2,188 cubic inches.

The material from which boxes are made varies in quality, but should be of the following thickness:

	<u>Inches</u>
Sides	$\frac{3}{8}$
Ends	$\frac{1}{2}$ to $\frac{3}{4}$
Top and bottom	$\frac{1}{2}$

The advantages of the box are:

1. Easy to handle
2. Necessitates careful grading
3. Neat in appearance
4. Displays fruit to good advantage
5. Ships well in car-lots
6. Adapted to storage
7. Known on the market as a package for fancy fruit.

The disadvantages of the box are:

1. Expensive
2. Increases cost of packing

The increased cost of packing apples in boxes is not always covered by the higher price received for the fruit when it is marketed.

### Marketing Apples in Baskets and Hampers

Baskets and hampers of various kinds are used quite extensively in some districts for marketing apples. This is particularly true of those sections of the country that grow summer and early fall varieties of apples extensively.

The Bushel Hamper - is one of the most common types of baskets used for apples. The dimensions of hampers vary somewhat, but the following are standard:

	<u>Inches</u>
Diameter on top	15
Diameter on bottom	9
Depth	19 $\frac{1}{2}$

A modification of the standard bushel hamper is the removable or loose bottom hamper. It is prac-

tically the same as the standard hamper, the chief difference being that neither the bottom or the top is put on at the factory. This allows the grower to pack the hamper through the bottom, starting with a face layer similar to that used in a barrel pack. It is slightly more expensive than the standard hamper, and also requires more time to pack, but on the other hand, the smooth face layer presents a more attractive appearance on the market.

The hamper is less expensive than the box or the barrel, and is easy to pack and handle. It is not a very rigid package, and for that reason is not very well adapted to systems of marketing that require long shipments and frequent handling or reloading of cars and trucks. The hamper is a very useful package for the storage of apples, since it allows better ventilation than the barrel, or the box, a very important consideration when dealing with varieties that are susceptible to scald.

The Round Bushel Basket - known in some places as the Michigan bushel, is now used more extensively than the hamper in many districts. The package itself costs a trifle more than the hamper, but it is cheaper to pack and prepare for shipment. Furthermore, the round bushel is more rigid than the hamper, thus it will stand more rough handling without breaking. One of the chief advantages claimed for the round bushel over the hamper is the fact that being wider, and not so deep, it displays the fruit to better advantage, thus making it command a higher price. The round bushel is also used very extensively as a shipping package for peaches.

### Special Packages for Certain Markets

Many styles of baskets and boxes in addition to those already described are used in marketing apples.

The Boston Bushel Box - is used almost exclusively as a marketing package for apples in all sections of New England that are affected by the Boston

market. It is a box  $16\frac{1}{2}$  inches square and 7 inches deep that readily lends itself to the marketing of apples and pears, as well as many kinds of vegetables.

The Five-eighths Bushel Basket - occupies the same place in the Philadelphia market, as a package in which apples and vegetables are marketed, as the Boston bushel box holds in the markets of central and eastern New England.

Fibre board packages for the marketing of apples are being used more extensively every year, particularly where the fruit is shipped direct from the grower to the consumer. Such packages are still in the experimental stage as far as large shipments to wholesale markets are concerned, but will probably come into more general use as time goes on.

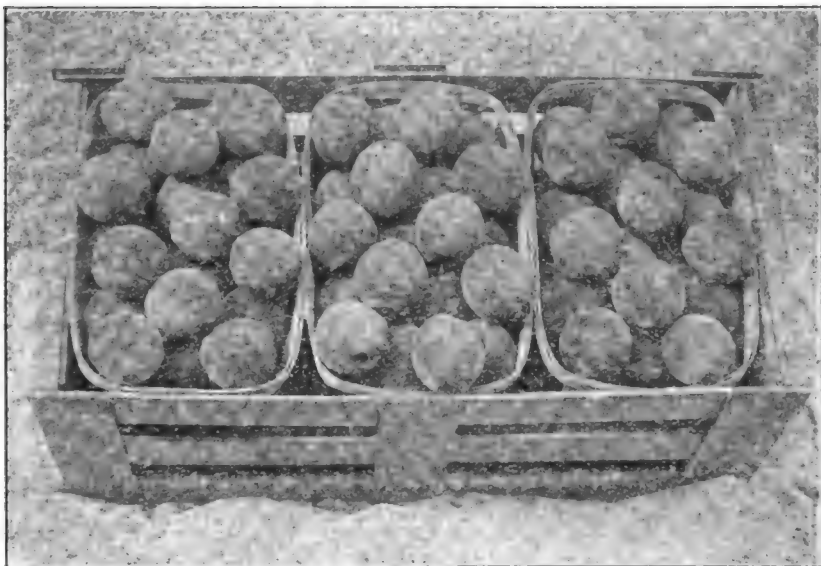


FIGURE 1. THE GEORGIA CARRIER

First till from left: round peaches 7 inches in circumference  
Second till from left: oval peaches 7 inches in circumference  
Third till from left: oval peaches  $7\frac{1}{2}$  inches in circumference

The Georgia Carrier - This crate holds the same place as a marketing package for peaches that the

box holds for apples. It is generally recognized as an excellent package in which to market the better grades of fruit. The package itself is more expensive, and it costs more to pack peaches in carriers than it does in round bushels, thereby making it essential that the fruit command a higher price when it reaches the market. The standard Georgia carrier is 22 inches long, 11 inches wide and 10½ inches deep, inside measure. It holds six till baskets each having a capacity of four quarts. The advantages of the Georgia carrier as a shipping package are as follows:

1. Neat, light, and durable
2. Can be easily packed and loaded into trucks or cars
3. Easily handled, yet too heavy to be thrown and caught, a common practice when handling lighter packages
4. Displays the fruit to good advantage, thus presenting an attractive appearance on the market.
5. Not easily opened, unless actually cut or broken
6. The fruit may be examined without disturbing the pack and the approximate number of specimens readily determined.

### SIZING AND GRADING

Success in the marketing of fruit and other farm products depends in a large measure on the care exercises in establishing and maintaining uniform grades. Without standard, uniform grades the bottom drops out of the most elaborate marketing plan. The "big four" of marketing, namely, to organize, standardize, advertise, and merchandise, all depend for success on a product that is uniformly and honestly packed and graded.

Too many fruit growers, particularly those in the East who market a large part of their fruit in barrels, hampers, and round bushels think of sizing and grading as synonymous terms, where, as a matter of fact, grading includes a great deal more than the separating of the fruit into a number of different sizes.

Color and condition should always be considered along with size in establishing grades and standards for apples and peaches. In other words, every package of apples or peaches of a certain grade should contain fruit that is uniform in size, color, and condition.

If the fruit in one crate of peaches marked "extra fancy" is not the same as the fruit in another crate bearing the same mark, the whole scheme of advertising and merchandising that fruit is doomed to fail from the very start. A trade name or brand should designate a uniform grade of good fruit, otherwise the advertising of that particular brand will do more harm than good.

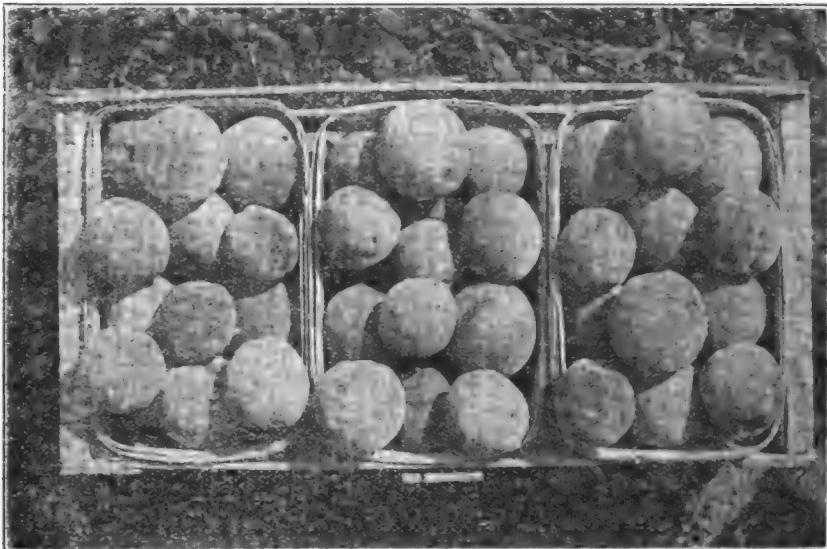


Figure 2. Lack of uniformity in grading as to size

### The Mechanical Sizer

The most efficient method of grading apples and peaches is through the employment of intelligent labor, working in conjunction with mechanical sizing machinery. It is possible and entirely practical to separate a given lot of fruit into a number of different sizes by running it over a mechanical sizer. On the other hand, the separation of the soft and blemished fruit from that which is sound, and the grading of the fruit on a color basis, is beyond the machine and must be done by human hands and eyes.

### Conditions That Govern Grade

The number of grades to make, together with the requirements of each grade, depends in a large measure on the general character of the fruit, the type of package used, and the market. Under some conditions, it may be more economical to pack and market fruit orchard run than to divide it into a number of grades. This would only apply where the fruit was quite uniform in size, color, and condition. It is desirable to make more sizes for apples to be marketed in boxes than is the case if the basket or barrel is the marketing package.

The same relation exists between the round bushel and the Georgia carrier in connection with the marketing of peaches. However, it is a mistake to make the size variation too great within the same package, even though the fruit on the face correctly represents the contents.

Apples marketed in baskets and barrels should be divided into quarter inch sizes, although half inch sizes are often used. Size in each case should be determined by the transverse diameter of the apple taken at right angles to a line running from the stem to the blossom end. The size of apples, packed in boxes, is indicated by the number of apples in the box, rather than by transverse diameter.



METHODS OF PACKING APPLESThe Barrel Pack

**Facing** - This consists in placing a layer of apples on the face end of the barrel in concentric rings. The apples should touch each other as far as possible without leaving any large spaces. The fruit on the face of the barrel should represent the grade of fruit in the entire package. If there is any variation in the size of the apples selected for the face, the smaller specimens should be placed in the outside ring and the large ones in the second ring. The inner ring should have one, three, or four apples slightly larger than those in the second ring. It is a mistake to finish the face with one very large or very small apple. Furthermore, it should not be necessary to patch a face by turning one or two apples on the side in order to make a tight pack.

In arranging the apples in the face layer, it is well to take advantage of the difference between the minimum and maximum transverse diameters of each apple. In other words, if a certain ring is just short of being full, it can usually be filled by turning a number of apples so that the larger diameters are in line in the circle. On the contrary, if there is not quite room for the last apple in a certain ring, space may be made by turning a number of apples so that the smaller diameters come in line with the circle.

After the face is complete, it is a good plan to place an apple with the colored side down over each space between the facers. A basket of apples is then poured in carefully without disturbing any of the fruit in the face or second layer.

**Filling and Racking** - A basket with a swinging handle should be used to fill the barrel in order that it may be lowered into the barrel to the surface of

the fruit already in place and gently tilted so as to empty its contents with a minimum amount of bruising. The fruit should not be allowed to fall even a few inches, since it takes a comparatively short drop to cause a bruise that will affect the keeping quality of an apple and in many cases start decay.

After each basket of fruit is placed in the barrel, it should be looked over in order to detect and remove any specimens that are not up to grade.

The barrel should also be racked after each basket of fruit is in place. Racking consists of a quick, sharp, shake of the barrel from side to side on a solid foundation. The object is to settle the apples into place and, therefore, any slow, swinging motion that would tend to throw the fruit from one side of the barrel to the other should be avoided. Racking barrels on the ground, or on an ordinary floor, is not satisfactory since there is a certain amount of give or elasticity that makes the operation less effective. It is important that the barrel be racked after each basket of fruit is in place, since the same result will not be accomplished by putting in two or three baskets of fruit and then racking. Racking is a very important feature of barrel packing, and should not be done in a careless manner.

Tailing the Barrel - The process of tailing a barrel is the most severe test of a good packer. It consists of arranging the last two or more layers of apples so that they will be fairly level and not come above the top of the chime. The base for the tail layers is made by racking the barrel with a follower held firmly on the apples. A follower is a circular piece of plank slightly smaller in diameter than a barrel head and padded on one side. The racking of the barrel with the follower in place leaves a comparatively level surface of apples on which the tail layers are placed.

The test of good tailing is to have the apples in the last two layers so tight and even that the head will exert the same pressure on each exposed apple. A common fault with unskilled packers is to allow a few apples to project above the others. This condition not only results in uneven pressure all through the barrel, but causes the projecting apples to be crushed, while the others receive insufficient pressure. The aim should be to have equal pressure upon every apple in the last layer. Many claim that the apples should project an inch, or an inch and a half above the chime before the head is pressed on, while others claim that any projection above the chime is unnecessary.

The thoroughness of the racking, while the barrel is being packed usually determines the height to which it should be filled. In other words, a barrel that has been thoroughly racked will not require so much pressing as one in which the fruit is rather loose. Too much pressing bruises the fruit to such an extent that rot soon develops, causing a slack pack and other difficulties.

### The Box Pack

The packing of apples in boxes requires more care and skill than the average barrel pack. The fruit must be carefully graded, both as to size and color, in order to insure an attractive package of uniform fruit. Many retailers prefer the boxed apple to the barreled apple, because the fruit is so uniformly graded to size that it is possible to determine the exact number of apples in each box. Furthermore, the dealer knows that it is very difficult, if not impossible, to make an attractive box pack unless the fruit is uniform in size throughout the entire package. It is a well established fact that apples cannot be marketed profitably in boxes, unless the fruit is clean and attractive, uniformly graded, and properly packed. Any attempt to market inferior fruit in boxes is bound to result in failure.

**Styles of Pack** - The standard pack for the boxed apple is the diagonal pack in which no two apples are placed directly above one another. The diagonal pack includes two common types; namely, the 2-2 and the 3-2. The pack used depends upon the size of the apples. The 3-2 pack will accommodate apples from 8 inches to 9 1/2 inches in lateral circumference, and the 2-2 pack will accommodate apples from 9 3/4 inches to 11 inches in circumference.

Occasionally, the straight or square pack is used, but it has been almost entirely discarded in favor of the diagonal pack. The diagonal pack has a wide range of adaptability, since it will accommodate over 20 different sizes in the standard apple box.

The following table shows the number of apples per box, the number of layers, the number of apples per layer, and the style of pack to use in packing apples of any given size:

TABLE I. CLASSIFICATION OF BOX PACKS

No. of Apples Per Box	No. of Layers	No. of Apples Per Layer	Style of Pack
48	4	12	2-2
56	4	14	2-2
64	4	16	2-2
72	4	18	2-2
80	4	20	2-2
88	4	22	2-2
96	4	24	2-2
104	4	26	2-2
112	4	28	2-2
125	5	25	3-2
138	5	1-3-5 2-4 28	3-2
150	5	30	3-2
163	5	1-3-5 2-4 33	3-2
175	5	35	3-2
188	5	1-3-5 2-4 37	3-2
200	5	40	3-2

The 2-2 pack is started by placing two apples at one end of the box, one in the corner and the other just half way between the first apple, and the opposite corner. These two apples are held in position by the left hand, while the third and fourth apples are placed in position. It is important that the space between the first apple and the opposite side of the box be evenly divided by the second apple to insure the proper alignment for the rest of the box. After the correct alignment is once secured by proper placing the first four apples, the balance of the layer is easily completed by placing the apples so that they will be in diagonal rows.

The second layer is started by placing two apples directly over the spaces between the first two apples in the first layer. The same procedure is followed throughout the entire box, each apple being placed in the depression formed by three or more apples in the layer below.

To start the 3-2 pack, three apples are placed at one end of the box, one in each corner, with the third just half way between the two. Two apples are then placed in the spaces provided by the first three, each projecting about one-half its diameter, thus creating a new set of three spaces. Apples are placed in these spaces, each projecting about one-half its diameter, thus creating another set of two spaces. This procedure is continued until the entire layer is completed.

The second layer of the 3-2 pack is just the reverse of the first in order that the apples may fit into the depressions between the fruits in the first layer. Therefore, the second layer will start with two apples because the start of the first layer leaves two depressions. The third and fifth layers will be just like the first, and the fourth layer like the second.

Alignment and Compactness - It is essential in box packing to maintain the proper alignment and

compactness. This is relatively easy if the fruit has been properly graded to size. The lateral rows should be kept even as the packing of each layer proceeds, in order that the companion rows may reach the end of the box at the same time. Failure to do this indicates that undersized or oversized apples are present in one or more rows which must be replaced with specimens of normal size in order that the layer may be compact and the alignment maintained.

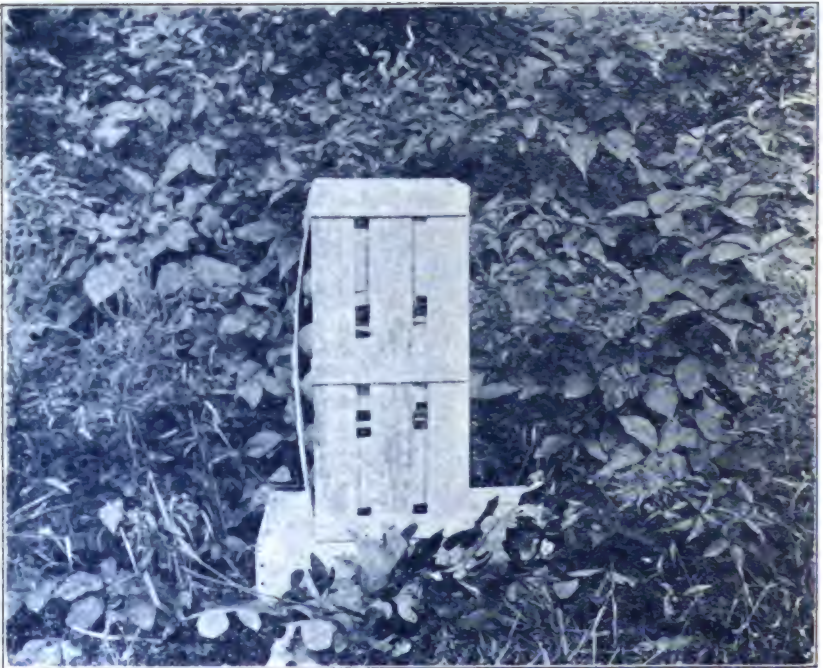


Figure 3. Packed crate, showing proper bulge of cover

**Bulge** - The fruit should be packed in such a manner that the surface of the face layer will be convex from end to end, with the highest point in the center of the box. There should be an equal amount of bulge, preferably about three-fourths of an inch at the top and bottom of the box, after the cover is in place. The Spring of the top and bottom take up the slack in transit and storage, thus keeping the pack firm.

Height of Ends - The ends of the top layer should be flush with the top of the box. If the fruit is too low, the pack will be slack and if too high the end apples will be crushed or badly bruised.

### LINERS AND WRAPPERS

Paper liners should be used in all apple boxes. The cost is slight, and they add materially to the appearance of the package. Lining paper may be purchased in sheets cut to fit the standard apple box, two sheets being required for each box. One liner is placed on each side of the box, so that it laps over the bottom slightly with a fold in the lower corners to allow for the bulge, and prevent the paper from tearing when the cover is pressed on and nailed. Each liner should also be wide enough to lap at least half way across the top of the box, when it is packed full of fruit.

All fruit packed in boxes should be wrapped in paper, cut to a convenient size. The standard size in common use is 10 x 10. For apples that pack 64 to the box or less, 12 x 12 paper will be more desirable, while a 9 x 9 size will be large enough for apples that pack more than 175 to the box. It is important to use a quality of paper that will not tear easily and which at the same time is soft and easy to handle.

Apple wrappers treated with a special colorless and tasteless oil are now being used extensively because of their beneficial action in connection with the control of apple scald. Oil treated wrappers are only slightly more expensive than the untreated, and are highly desirable for the wrapping of fruit that is going to be held in storage for a considerable length of time.

### THE ROUND BUSHEL

The packing of apples or peaches in round bushel baskets is a comparatively simple operation, com-

pared to the packing of a box or a Georgia carrier. Nevertheless, it requires considerable skill and practice to put up a neat, attractive pack.

The most common style of pack used for the round bushel is the jumble pack with the top layer faced. In this pack, the basket is filled almost level full with frequent racking to settle the fruit, and insure a solid base for the face layer. A follower slightly cone shaped, and of a size that will readily fit inside the rim of the basket is then held in place, and the basket thoroughly racked or lifted up a few inches and brought down with some force on a solid bench or block.

This operation leaves the fruit slightly higher in the center of the basket than it is toward the edge, a condition that is very desirable to have before the face layer is started. The face layer is then put in place, the most common method being to make a complete ring of fruit just inside the rim of the basket, and follow this with other rings, until the entire layer is in place. The fruit in the outside layer of the face should be just even with or very slightly above the rim of the basket, with each succeeding ring slightly higher with the highest point at the center. This results in a bulge to the cover when it is put in place which should insure a full rather than a slack package when it reaches the market.

In some cases the round bushel is ring packed all the way through from the bottom. This makes a very neat, attractive pack, but the additional expense is not worth while unless the fruit is very large, or particularly fancy. One of the chief problems in putting up such a pack is to have the face layer at just the right height. In some cases it will be too high, and in other cases too low, both undesirable conditions that must be corrected if the fruit is to arrive at its destination in good condition.



### THE BUSHEL HAMPER

The standard bushel hamper is packed very much like the round bushel basket, while the loose bottom hamper is packed like the barrel. The common style of pack is the jumble pack with the face layer ring packed. Apples marketed in hampers are rarely ring packed all the way through, the extra expense seldom being justified.

### METHODS OF PACKING PEACHES

The same principles apply to the packing of peaches that have been described for apples. Peaches graded so that the specimens in any one package are uniform in size and color can be marketed to better advantage than ungraded fruit. A well packed, attractive package of peaches demands a higher price than fruit that is improperly graded and packed. Peaches as a rule do not stand shipment as well as apples, thereby making grading and packing of the utmost importance and essential factors in successful marketing.

#### The Georgia Carrier

Arrangement and Style of Pack - The standard pack for the Georgia peach carrier is the same as the standard pack for box apples; namely, the diagonal pack in which one fruit does not rest directly over another. The only difference is that in the apple box the fruit is packed in the box itself, while in the Georgia carrier the fruit is packed into four quart tills, six of which go into each crate or carrier.

In packing the fruit into these tills the arrangement is similar to that used in packing boxes. The 2-1, 2-2, and 3-2 packs will accommodate fruit of almost any size. The 2-2 pack illustrated in Figure 1 will handle all peaches from about six and three-



5½-6	1	15/16	2-2	4	14: 14: 14:	14: 56	336	: Pack of good height
6¾	2	15/16	2-2	4	12: 12: 12:	48	288	: Pack of good height
6¾	2	1/8	2-2	4	10: 10: 10:	40	240	: Requires two 5¾" peaches
								: to fill out bottom layer
								: in each till
6¾	2	3-16	2-2	3	10: 12: 12:	34	204	: Poor pack
				3	12: 12: 12:	36	216	: Requires 6¾" fruits in
								: bottom layers of each
								: till to make good pack
7	2½		2-2	3	10: 10: 10:	30	180	: Pack of good height
7¾	2	5/16	2-2	3	10: 10: 10:	30	180	: Too full. Crate requires
								: stripping
			2-1	3	9: 9: 9:	27	162	: Pack of medium height
7¾	2	3/8	2-1	3	9: 9: 9:	27	162	: Pack of good height
7¾	2	7/16	2-1	3	8: 7: 8:	23	138	: Pack of good height
			2-1	3	7: 8: 7:	22	132	: Pack a bit slack
8	2	9/16	2-1	3	8: 7: 8:	23	138	: A trifle full. Crate re-
								: quires stripping
			2-1	3	7: 8: 7:	23	132	: Pack of good height
8¾			2-1	3	6: 6: 6:	18	108	: Pack of good height

## MARKETING I

A brand  
pack will  
poor quality  
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extensively  
and vegetable  
boxed apple

While it  
in transportation  
fundamental  
around the  
the quality  
correctly

uniformly good as to quality and  
and a ready sale, while fruit of  
improperly or dishonestly  
the better class of buyers.  
bel on a good package of fruit  
the grower, while a label on  
it is a good thing for the buyer.  
e neat, attractive, and dis-  
he greatest value.

e Georgia carrier usually have  
l in addition to such marks as  
distinguish grade, variety, style  
. Labels for barrels and baskets.  
are usually placed on the face  
the pad or cover.

### TRANSPORTATION

of packaged apples and peaches in  
a most important step in the mar-  
products. Detailed methods of  
lly discussed in Lesson 5. It is  
the tiers of boxes or barrels be  
l and that the cars used for trans-  
roducts are precooled.

and probable car requirements of  
ery state and district are kept  
mind by the carriers. Additional  
been provided, definite running  
blished, and many box cars have been  
quipped for the transporting of fruit  
s. Efficient storage-in-transit for  
as been secured by the wholesale trade.

is necessary to take extra precautions  
ng apples and peaches, in reality the  
factor that determines price centers  
em of grading and packing in order that  
of the product merchandised may be  
identified.

## MARKETING APPLES

### QUESTIONS FOR

As soon as you have  
submit your answers to 1  
11., for grading or cor

Do not fail to write  
plainly on each set of an  
etter of the lesson, and  
question in full before w  
ins your answer to the 1  
f you have one.

Answer all questions.  
against you.

- . How is maturity
- I. Give seven of  
fruit package
- II. Name the advan  
standard apple
- V. Why is the Geo  
nized as the m  
keting peaches
- . a. What is the  
b. What do you  
and facing?
- VI. Explain briefly
- VII. What determines  
pack adopted for
- VIII. Why is it import  
bear distinctiv
- X. What is the comm  
in the bushel ha
- . What are the din  
box used in mark

## S AND VEGETABLES LESSON 19

d this lesson, answer these questions and  
ican Institute of Agriculture, Chicago,

ame, address, and matriculation number  
you send. Be sure to give the number or  
number of each question answered. Write the  
g the answer. Be brief and explicit. Con-  
indicated, if possible. Use a typewriter,

any are omitted, the omission will count

indicated in apples and peaches?  
the requirements of a good

stages and disadvantages of the  
e box.

orgia carrier generally recog-  
most desirable crate for mar-  
s?

e standard pack for the box apple?  
u understand by tailing, racking,

fly the 2-2 pack.

nes the style and arrangement of  
l for fruit of various grades?

portant that fruit packages should  
ctive labels?

common pack used in placing apples  
el hamper?

le dimensions of the standard apple  
a marketing Western apples?











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